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"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of each Month.

Editorial and Management Notices.

Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printer's MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked "Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

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Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

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"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States, as set out below.

Changes of copy for advertisements must be in our hands on or before the 17th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

"The Fruit World" Offices (where copies and full particulars are obtainable) are as follows:—

Victoria (Head Office): 9 Queen Street, Melbourne. **New South Wales**: Carruthers, Farrum & Co., 77 King Street, Sydney. **South Australia**: W. F. McConnell, Grenfell Buildings, Grenfell Street, Adelaide. **Tasmania**: Saunders & Co., Murray Street, Hobart. **Western Australia**: D. L. Hetherington, Colonial Mutual Buildings, St. George's Terrace, Perth. **Queensland**: Gordon & Gotch Ltd., Queen Street, Brisbane. **New Zealand**: Gordon & Gotch Ltd., Wellington, Dunedin and Auckland. **Great Britain**: Harvey H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

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E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director: HON. L. M. SHOEBRIDGE, M.L.C.

NEWS IN BRIEF.

The heavy planting of Prunes during 1918 and 1919 will be felt next year. Now is the time for all Prune growers to organise. Join the Prune Growers' Association.

At Leeton, N.S.W., a grower picked 38 tons of Pullar's Cling Peaches off 2½ acres.

The despatch of fresh fruit trains from Griffith (Murrumbidgee Irrigation Areas, N.S.W.) is proving highly successful.

Many growers on the Murrumbidgee Irrigation Areas (N.S.W.) have worked over their Elberta Peaches to other varieties.

Dried Angelina Burdett Plums are not classed as Prunes, and should not be dried commercially for sale.

Heavy crops of Ohanez Grapes are reported at Griffith, N.S.W. Organisation is necessary to profitably dispose of the crops.

Now is the time to order seeds for sowing cover crops at the end of February and in March.

The movement in favor of selling of fruit by number instead of by the lb. in Victoria is steadily gaining ground. Already Oranges, Bananas, and Passion-fruit are sold by number, whilst Apples and Pears are sold by weight. The present position is anomalous, and should be altered.

VICTORIA.

The Division of Horticulture.

A Splendid Forward Move.

Victorian fruitgrowers will hail with satisfaction the action of the Department of Agriculture in creating a special division for the administration and oversight of the horticultural industries. Prior to this important move, several sections of the press advocated various specifics. One urged the appointment of a market superintendent, and others the creation of a Department of Horticulture. The "Fruit World" maintained this attitude consistently—that there should be created a Horticultural Division of the Agricultural Department—this being in accordance with the recognised practice in the other Australian States. Mr. Ward was the first to inaugurate these in Tasmania and Queensland.

The Horticultural Division, as now constituted, has before it a long career of constructive usefulness in building up the great horticultural industries of the State, and the new Superintendent has already intimated his intention to, as far as possible, work in conjunction and co-operation with fruitgrowers and not against them, and consult and confer with them before recommending any drastic changes, for Mr. Ward is a firm believer in educational methods rather than too much legislation. He recognises that growers are producing fruit for a livelihood and not for a hobby and amusement. The Division will also act in a consultative and co-operative manner on the horticultural course and orchard activities at the Burnley School of Horticulture.

instruction, which was under the direction of the Agricultural Superintendent; (2) the inspection of fruit in the port and city, under the Exports' Superintendent. Now, all matters pertaining to fruit or horticulture, including the viticultural experiment station at Rutherglen, and the nursery at Wahgungyah, are included in the Horticultural Division.

Whilst it was not to be expected that the Science Branch could be included in the Horticultural Division, nevertheless that Division will have the active assistance and co-operation of the Biologist, Plant Pathologist, and Entomologist. In fact, it is recognised that the horticultural industries would receive much benefit, if the Science Branch were considerably strengthened by the appointment of capable field-officers to undertake scientific experiments in the several fruit producing districts.

The creation of the Division of Horticulture is one of the most important moves ever made for the development of the horticultural industries of Victoria.

For many years, there has been unfortunately a certain amount of friction between the fruit industry and the Department. It is hoped that all cause for complaint will now be removed, and that a constructive programme will be drawn up and put into execution.

Victoria greatly needs experimental orchards, such as are conducted at Blackwood and Berri, in South Australia, and Bathurst, Glen Innes, and other places in New South Wales, and no doubt Mr. Ward will do his utmost in this respect for Victoria.

The statistical work is sadly in need of being revised. It would be a splendid thing if an accurate census relating to orchards and varieties could be compiled.

It is understood that amongst the duties to which the Superintendent will give his early attention will be instruction in packing and grading. The success of packing schools has been already demonstrated in the several Australian States. Mr. Ward was the first to inaugurate these in Tasmania and Queensland.

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The Canned Fruits Industry.

Central Organisation Needed to Supervise the Bounty Scheme.

FOR THE PAST THREE SEASONS, canned fruit "pools" have operated, same being financed by the Federal Government. For the 1923-24 season, the Federal Government, desiring to be free of trading enterprises, granted a bounty of about £135,000 to the canners, provided they fulfilled certain conditions, including a stated price to growers.

When announcing the Government's intentions, the Acting Prime Minister (Dr. Earle Page) earnestly counselled various interests concerned, to unite for mutual protection and the development of the industry, as no further assistance could be expected from the Government, the present bounty being in the nature of a grant to enable canners and growers to form their own organisation.

Will that organisation be formed, or will the industry revert to the previous chaotic condition?

A serious position has arisen which challenges the attention of every thoughtful grower and canner.

Under the pooling system, the canning industry was organised. Each factory was allotted its quantities of the various fruits for processing, deliveries were organised, and although the factories packed under their own individual labels, yet the entire pack of canned fruit was dealt with comprehensively by an executive, representing the various interests concerned.

Prices were stabilised, propaganda was conducted, increased consumption of canned fruit resulted: the "pool" had its own offices with a trained staff.

The industry operated as a composite whole.

What is the position to-day?

The "pool" organisation, with capable officers, is in danger of being disbanded, and in that event, there will be no organised deliveries to factories, no unity of purpose or action; no organised push to increase sales, no confidence in forward buying; and instead, there will be competition amongst canners for securing trade, varying discounts and commissions, and unstable prices.

With the retention of an organised staff to supervise and control the canning industry now operating under the Federal Bounty Scheme, the good work performed during past years will be continued, the effect of the advertising will be made cumulative instead of being dissipated, there will be confidence on the part of the distributing trade, the general public, and the Government.

In order to consider the continuance of the present organisation, or united control in some form, a meeting of canners, (proprietary, co-operative and Government) was held recently, but it seems that it was found impossible to arrive at a basis mutually agreeable to all concerned.

The objects of the proposed organisation were (1) to fix prices, commissions, discounts, freights, wholesale lists; (2) to assist in making the working of the bounty scheme between the inspectors, Government canners and growers run smoothly; (3) to arrange the regulation of selling prices for New Zealand, the East of Europe; (4) to arrange for advertising propaganda, to create confidence in the minds of the trade and public, and to enable an expansion of the industry to take place.

The funds for the conduct of the organisation to be raised by levy estimated at 2d. per dozen on the pack put up under the bounty scheme.

An organisation conducted on these lines would have the confidence of the growers, canners, the Government and the general public, and would be in a position to negotiate with the Government over any difficulties which arise during the current season, and would provide the avenue of approach for any assistance which may be deemed necessary next season.

For it must be borne in mind that the peak of production has not yet been reached, and that increasing tonnages will be coming forward as the orchards planted for soldier settlers come into bearing.

* * *

A recent estimate of the quantities of fruit on offer for canning showed the various fruits as follows:—

	Tons.
Apricots	3,150
Pears	4,350
Cling Peaches	13,800
Free Peaches	2,530
Pineapples	6,230
Total	30,060

Owing, however, to the severe attack of the Rutherglen Bug the quantities of Apricots, Pears and Peaches are in danger of being heavily reduced.

To show the extent of the operations to be conducted this season, and the necessity for united action, we now give the names of the factories in the several States which are to operate under the bounty scheme:—

Victoria. — Shepparton Preserving Co., Kyabram Cannery, Australasian

Jam Co., Studley, Rosella, Hoadleys, Leggo's, Tuckfield's, Bendigo Fruit-growers Co-operative.

New South Wales. — Leeton Cannery, H. Jones & Co., Ballgarry Cannery, Taylor Bros., Stanmore, Peacock Jam Co.

Tasmania. — Port Huon Co-operative, H. Jones & Co. Ltd., Stanmore Co., W. D. Peacock and Co.

South Australia. — S.A. Fruit-growers' Co-operative, H. Jones & Co. Ltd., Robson's.

Queensland. — State Cannery, J. E. Barnard & Co., Hargreaves & Sons, Duthie Bros., R. Sumner, Finucan's, H. Moxey.

It would be a triumph if an organisation could be created this season for handling this complex business, and it is to be hoped that before the opportunity finally passes, a farseeing policy will be adopted, and that the wisest counsels will prevail.

CANNED FRUIT PRICES.

Peaches Slightly Dearer.

Prices have been announced of new seasons' canned Peaches, Apricots and Pears. Peaches have been advanced 6d. a dozen tins, Apricots are 6d. cheaper, and Pears are unchanged. The distributing prices are as follow:—

Peaches, 30oz., clingstone, 9/- dozen; ditto, sliced, 9/-; Elberta, 8/-; Elberta sliced, 8/-; Apricots, 9/9; pie Apricots, 8/3; Pears, 11/6.

A difficulty has occurred in connection with the distribution of Peaches. This has been brought about by merchants having been offered what they consider to be an inadequate allowance for handling the fruit. They point out that they have been distributing canned Peaches at a price which has shown them an unpayable margin, but that they agreed willingly to the terms under which they have been operating to assist the fruitgrowing industry. They consider that it is unfair to ask them to carry on the business indefinitely upon unprofitable terms.

* * *

Prices to Growers.

The foregoing rise in prices, which works out to about £2/10/- per ton for the Cling Peaches, should be reflected in the price to be paid to growers.

TREE PLANTING IN NEW YORK STATE, U.S.A.

Huge Figures for Reafforestation.

More than seven million trees were planted in 1922 in New York State, the actual number being 7,104,525. This is an increase over the year before of 3,417,165. The number of orders for trees nearly doubled as compared with last year.

The total number of orders, 1,216, compared with orders of the year before is taken by the commission as an example of increased interest in reforestation.

The Art of Packing Fruit.

Standardised Grading and Packing are of Great Importance.

Packing Schools Should be Organised This Season.

THE IMPORTANCE of standardised packing of fruit for the overseas, interstate and local markets, is now generally recognised.

In order to place before our readers the latest advices on this subject, we are republishing by request the illustrations prepared by Mr. Basil Krone, of the Department of Agriculture, Victoria.

The Departments bulletin (No. 47) on this subject is extremely useful, and forms the basis of the scheme for instruction in the art of packing fruit.

It is to be hoped that the Departments of Agriculture in the several States will go whole-heartedly into this very important matter, and will make a feature of organising "packing schools" in the orchard districts.

Dealing with the Art of packing fruit, Mr. Krone writes:—

First, let us consider the grading of fruit into the following sizes:— $2\frac{1}{4}$, $2\frac{1}{2}$, $2\frac{3}{4}$, and 3 inches in diameter,

which are to be packed into dump cases, the inside measurement of which should be $18 \times 8\frac{2}{3} \times 14\frac{1}{4}$ (2,223 cubic inches). In packing the $2\frac{3}{4}$ in. size, the procedure is as follows:—First place a thin layer of wood wool or a corrugated straw-board in the bottom of the case to protect the fruit. Take a sheet of tissue paper in one hand and place an Apple calyx end in the paper, folding the ends of the paper across the stalk and beneath on the lower cheek of the Apple (the ends of the paper will serve as a pad for the fruit to rest on). Then place the fruit in the bottom of the case as shown in Fig. 3, and continue until the layer is finished.

This is called the 3-2 pack on account of commencing with 3 Apples, then 2, and again, 3 and 2, and so on. It is very important that the second layer must

rest in the spaces

of the bottom layer and not directly

on top of the fruit in it. Therefore, the second layer will commence with two Apples instead of three, as in the first layer. How to commence the second and each alternate layer is illustrated in Fig. 4.

Fig. 5 shows the medium-shaped $2\frac{1}{4}$ in. Apple on the 3-2 pack. It will be noticed in Fig. 6 that each Apple is facing in a certain direction. The outside ones on the top row of this case were left unwrapped in order to show more clearly the position of each fruit. All the other Apples in the case were facing the same way. This is one of the customs in packing Apples for export.

It has been recognised that an Apple is harder round the calyx end than on the cheek. It is usual, therefore, to place each Apple on an angle, in order that a portion of this harder part of the fruit will come in contact with the side of the case instead of the full cheek. Thus when cases are being stacked on their sides in railway trucks, boats, etc., the chance of bruising is minimised. For this reason the cheek pack is adopted in nearly all sheds in the Commonwealth, instead of the calyx or flat pack. In this latter pack, where the full cheek of the Apple is exposed to the side of the case, if the side laths have been cut too thin, which often happens, the fruit is very liable to be damaged.

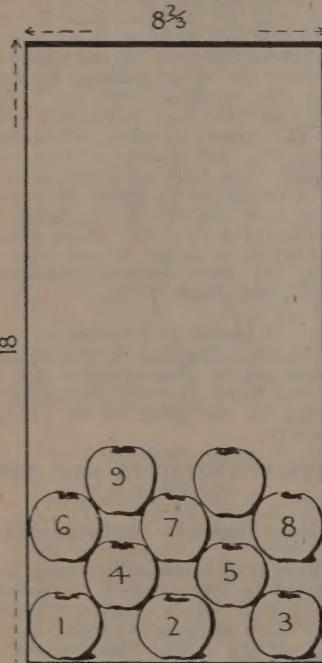


FIG. 3
How to commence bottom layer of 3-2 pack.
(Continue in this way till layer is finished.)

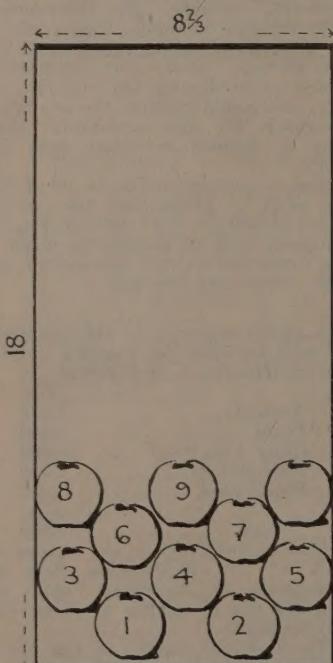


FIG. 4
How to commence each alternate layer of the 3-2 pack.
(Fruit placed in spaces of layer below.)

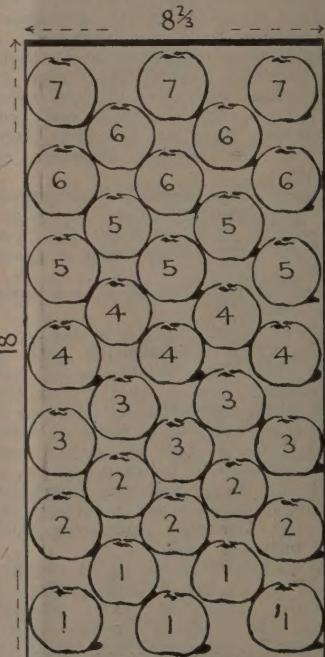


FIG. 5
3-2 pack and 7-6 layer. Total, 228 Apples.

All varieties and shapes of the smaller Apples are packed on the 3-2 cheek pack. Fruit from $2\frac{1}{2}$ to 3 inches in diameter are packed on what is known as the 2-2 cheek pack (Fig. 7). The method of placing the bottom layer can be seen at a glance. The second layer is shown in Fig. 8.

Fig. 9 will show how to count the layer of the 2-2 pack.

Apples over the 3 in. grade (very large) will pack on the 2-1 pack (Fig. 11). It is very important that in every pack no two of the fruits will rest directly the one on top of the other, but each will have a space or pocket beneath it. It is well to mention here that any fruit large enough to pack on the 2-1 system is too large for export, and should be sold on local markets, as it does not keep as well as the smaller fruit, particularly if picked from young trees.

The art of packing a geod case is to get all sizes and shapes to the correct height—the fruit being neither too high or too low. Ready Reckoners have therefore been compiled and are published on pages 69, 70, 71.

The amount of space or size of pocket between each fruit in a layer will decide whether the top layer will be in correct position. If these spaces be large or small, the fruit will come high or low accordingly.

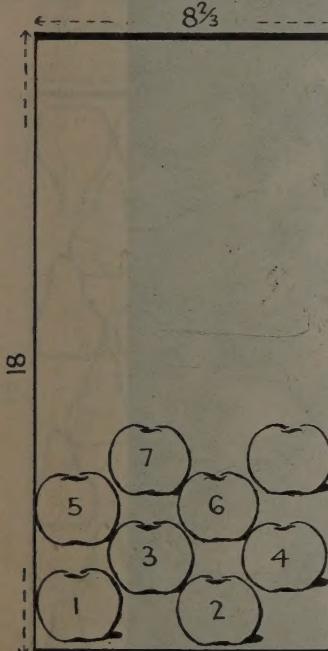


FIG. 7
How to commence the 2-2 pack.
(Continue in this way till layer is finished.)

Fig. 6—The 3-2 Pack.

(This case was previously packed on the 2-2 system, and left a space between the upper layer and the top of the case. Packed on the 3-2 method the fruit came just to top of the case.)

The illustrations in this article have been kindly supplied by the "Journal of the Dept. of Agriculture of Victoria."

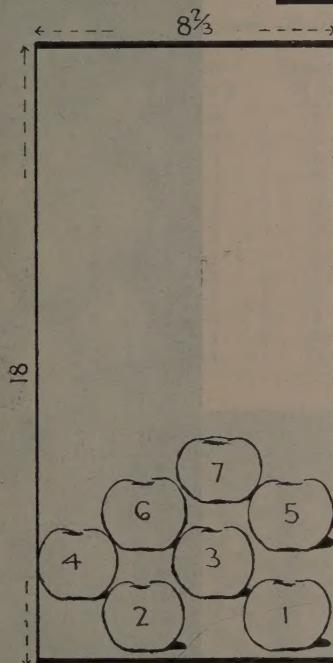
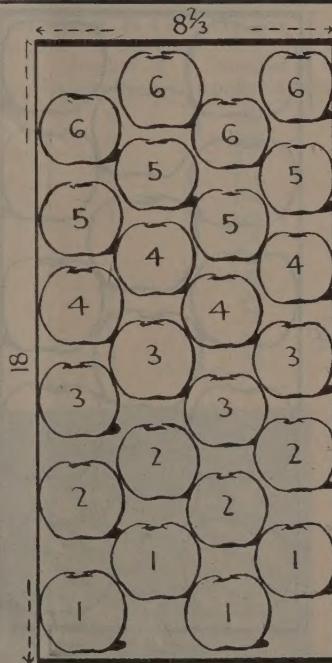
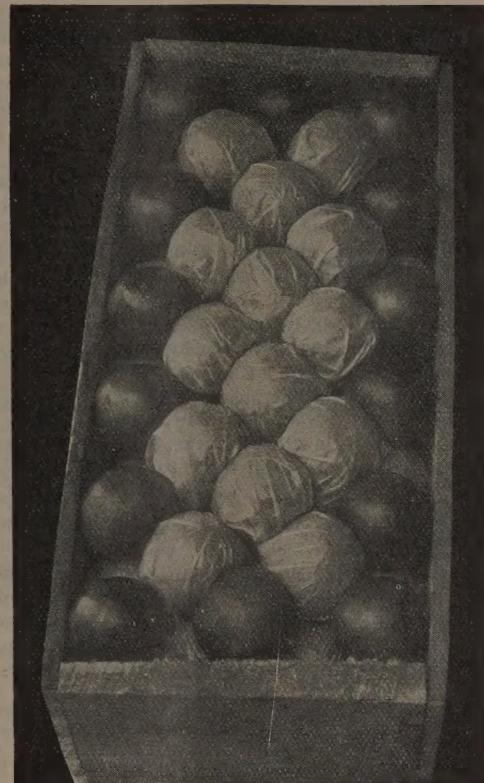


FIG. 8
How to commence second layer of 2-2 pack.
(Place fruit in spaces of layer below.)



2-2 pack and 6-6 layer. Total, 144 Apples.

The Ready Reckoners indicate which packs to adopt for the various shapes and sizes. This may be thought unnecessary, but it will often be found of use. For instance, when packing Jonathan Apples of a $2\frac{1}{4}$ in. grade it may be these will

pack very neatly

on the 2-2 pack, but not reach the top of the case, yet not leave room for another layer. All 2-2 packs contain six layers, and all 3-2 packs contain seven layers (see Ready Reckoner); and, by packing the 2½ in. grade fruit on the 3-2 instead of 2-2 system, the size of the pockets or spaces will be made slightly larger, thus the extra layer, which is in all 3-2 packs, will come nicely to the top of the case.

Fig. 12 shows large 2½ in. grade Jonathans packed on the 3-2 instead of 2-2 system, which latter would have come too low when finished. Fig. 6 shows a case of smaller fruit of the same grade, which likewise should be packed on the 3-2 system. The writer specially packed these two cases of the 2½ in. grade Apples, as

many packers have difficulty in bringing them high enough in the case and many packs of this grade are found to be slack on arrival at their destination.

It will be noted that both cases are packed on the 3-2 system, but one has the 5 x 5 layer, which means the case contains 175 Apples, and the other the 6 x 5 layer, this case containing 193 Apples. It is, of course possible and quite correct to pack some shapes of $2\frac{1}{2}$ in. grade on the 2-2 pack. The Ready Reckoner shows this.

It is the same with the 2-1 pack. If it comes too low, it should be altered to the 2-2 pack. Of course, only a certain number of fruits must be in each layer, otherwise the pockets or spaces may be too large or too small and the fruit come too high or too low. The Ready Reckoner will show the number of Apples to be put in each layer; and, if they are graded carefully, the packing will take care of itself.

HOW TO USE THE READY RECKONER.

The asterisks in the Ready Reckoner point to packs by which most of our commercial varieties can be brought to the correct height; but, of course, with abnormally shaped ones, the less common packs may be found the most suitable. The most important act is to get the correct number of Apples in the bottom layer (Fig. 5 and Fig. 9.) These diagrams illustrate the 3-2 and 2-2 packs, which are packed in layers described as the 7 x 6 and 6 x 6 layers. Attention is particularly drawn to the description of the layer as well as the pack, as everything depends on the layer in bringing the fruit up exactly to the top of the case.

When grading, most packers divide each grade into two, that is, they pack small $2\frac{1}{4}$ in. and large $2\frac{1}{4}$ in., small $2\frac{1}{2}$ in. and large $2\frac{1}{2}$ in., and so on, as a $\frac{1}{4}$ in. range is allowed between each size. For instance, a $2\frac{1}{4}$ in. Apple would mean any size not less than $2\frac{1}{4}$ inches in diameter, and not more than $2\frac{1}{2}$ in.; $2\frac{1}{4}$ in. grade would be from $2\frac{1}{4}$ to $2\frac{1}{4}$ in.; and $2\frac{1}{2}$ in. grade would be from $2\frac{1}{2}$ to 3 in.; above 3 in. and not more than $3\frac{1}{4}$ would be 3 in. grade.

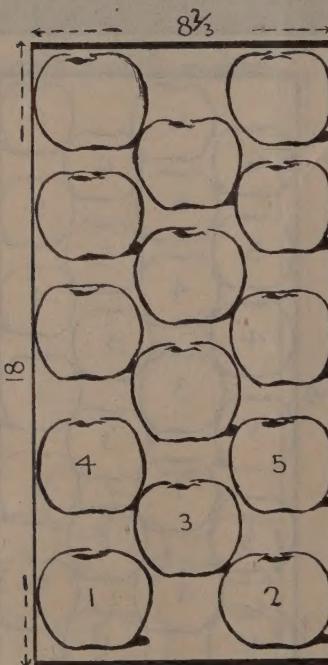


Fig. 11

(Alternate layers rest in spaces of lower layers, as in other packs.)

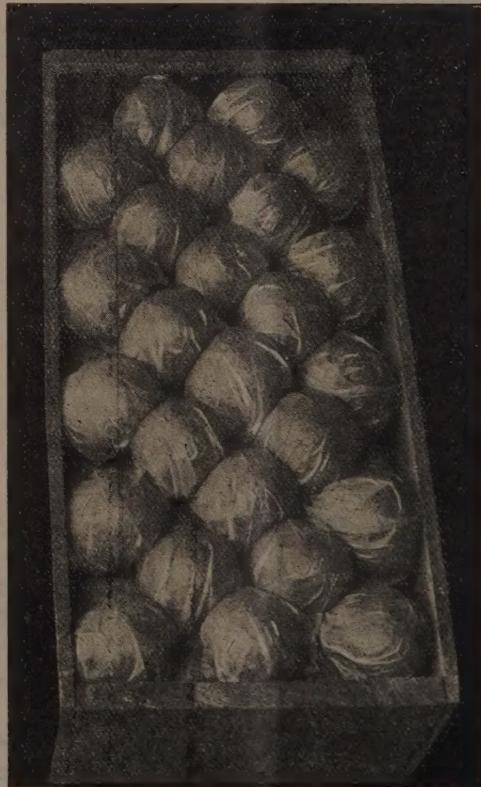


Fig. 12.—Case of $2\frac{1}{2}$ in. Jonathans Packed on the 3-2 System.
(If packed on the 2-2 method the fruit would not reach the top of the case.)

To standardise the pack, all cases should contain the same number of Apples for their respective sizes and grade, and, no matter whether one or 1,000,000 cases were opened, the number in each should correspond.

PACKING TOMATOES FOR DESPATCH TO MARKET.

There is an art in packing Tomatoes for despatch to market; well graded and packed Tomatoes carry best, and bring the best prices: Mixed grades are not so satisfactory, and if the Tomatoes be loosely placed in cases they are liable to damage during transit.

In order to be of service to growers, the Victorian Department of Agriculture has made available the services of Mr. Basil Krone to give instruction in the art of packing. Mr. Krone has spent some time at Shepparton instructing growers in the packing of stone fruits and Tomatoes.

As a definite Tomato case has not yet been standardised in Victoria, the packs hereafter mentioned (states Mr. Krone) are only suitable:

For our "Flat Bushel" case 26 x 6 x 14½ inches inside measurement clear of division.

There are several points, however, which should never be overlooked by packing sheds when despatching Tomatoes.

In every instance when packing for
(Continued on Page 70)

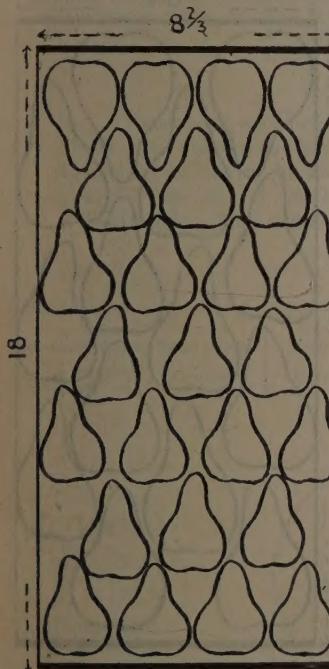


FIG. 14

Pears packed in Tray.

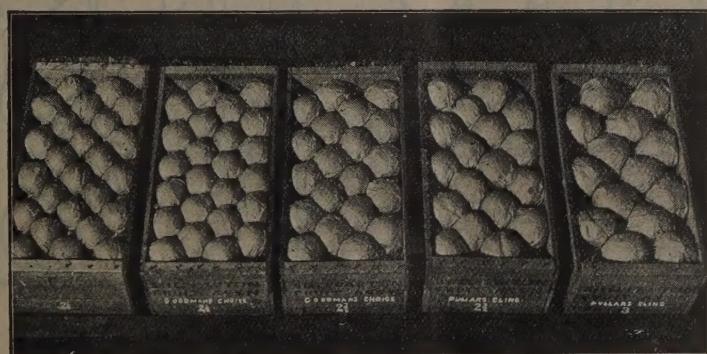
Standard Apple Packing in Dumps for Export, 18 x 8 2-3 x 14½ inside Measurement.

Style Size.	of Pack.	Descrip- tion of Layer.	No. of Layers in case.	No. of Apples in case.
2½ in.	3-2	8 x 7	7	263
2½ in.	3-2	7 x 7	7	245
2½ in.	3-2	7 x 6	7	228
	3-2	6 x 6	7	210
2½ in.	3-2	6 x 5	7	193
2½ in.	3-2	5 x 5	7	175
2-2	8 x 7	6	180	
2-2	7 x 7	6	168	
2½ in.	2-2	7 x 6	6	156
2½ in.	2-2	6 x 6	6	144
2-2	6 x 5	6	132	
2-2	5 x 5	6	120	
3 in.	2-2	5 x 4	6	108
	2-2	4 x 4	6	96
	2-1	7 x 7	5	105
	2-1	7 x 6	5	98
3 in.	2-1	6 x 6	5	90
	2-1	6 x 5	5	83
	2-1	5 x 5	5	75
	2-1	5 x 4	5	68
	2-1	4 x 4	5	60
	2-1	4 x 3	5	53
	2-1	3 x 3	5	45

Peaches present practically no difficulty in packing; however, a few details should be observed to ensure the turning out of a good package, viz.:—The Peach should be placed in the case on its cheek in such a manner that the lip and flower end which are the delicate parts of this fruit, do not come in contact with other Peaches on the sides, bottom, or lid of the case in any way. The fruit must be packed firmly, without bruising, and only matured but hard and well colored specimens used.

Diagonal System—Peaches in Flat Bushel, 26 x 6 x 14½.

Size.	Style of Pack	Description of Layer.	Number of Layers in case.	Number of Apples in case.
2 in.	2-2	5 x 4	9	324
2½ in.	2-2	4 x 4	9	288
2½ in.	2-1	5 x 5	8	240
2½ in.	2-1	5 x 4 open	8	216
2½ in.	2-1	4 x 4	8	192
2½ in.	2-1	4 x 3	7	148
2½ in.	2-1	3 x 3	7	126
2½ in.	2-1	3 x 2	7	106
3 in.	2-1	3 x 3	6	108
3½ in.	2-1	3 x 2	6	90
3½ in.	1-1	3 x 3	6	72
3½ in.	1-1	3 x 2	6	60
3½ in.	1-1	2 x 2	6	48



Various Packs of Peaches.

market, Tomatoes should be graded for color as well as size, that is, all green specimens of a corresponding size should be packed by themselves, and the red Tomatoes of corresponding size in other cases by themselves, and the latter disposed of in nearer markets or local trade.

This is possibly the most important feature in grading Tomatoes, otherwise if green and red are packed together, the tendency is on arrival at its destination for the red fruit to be either over ripe with odd specimens squashed, and the rest of the package spoiled as a result of the resultant loose packing and shaking of the fruit in transit.

Tomatoes in all instances must be packed firmly. Loose packing with this fruit (or vegetable as it may be called) is absolutely fatal.

The Tomato is packed diagonally on its edge in the case, and in such a manner that no stalk ends can be seen, no matter which part of the case is opened first, and the whole package presents a neat and attractive appearance when opened up to the buyer.

In addition to sorting out the diseased specimens all badly deformed

fruit should be sorted out and packed in cases by themselves. If included with prime fruit, they only lower its value, and if sold by themselves, they generally bring a price in accordance with their quality. On account of the nature of the Tomato, the packing is arranged in such a manner that

there is no great bulk or heavy weight of fruit resting on each other to cause damage in transit.

Packing Chart for Tomatoes in "Flat Bushel" case 26 x 6 x 14½ (inside measurement). All fruit must fit firmly in the case. The asterisks (Continued on page 71.)

Packing Pears.—The following tables are suitable only for Packham's Triumph and Vicar of Winkfield. With Pears it is necessary to have a chart for almost each variety, as type varies so much with this fruit.

Size.	Style of Pack.	Descrip- tion of Layer.	No. of Layers in case.	
			Pears in case.	Pears in case.
2½ in.	3—2	5 x 4	8	180
2½ in.	2—2	6 x 5	7	154
2½ in.	2—2	4 x 4	7	112
3 in.	2—2	4 x 3	6	84
2½ in.	3—2	5 x 4	4	90
2½ in.	2—2	5 x 5	4	80
2½ in.	2—2	4 x 4	3	48
3 in.	2—2	4 x 3	3	42
2½ in.	3—2	5 x 4	8	180
2½ in.	2—2	5 x 4	7	126
2½ in.	2—2	4 x 3	6	84

Packham's Pears in Dumps,
Diagonal Pack.

Packham's in Half-Dumps, 18 x
x 8 2-3 x 7½ inside measurement,
Diagonal Pack.

Vicars in Dumps.

Almost every grower in the State understands what is meant by Diagonal and other systems of packing, but there are many who are unable to pack all varieties and shapes to the correct height in the case, and it is to assist such that these charts have been compiled.

All fruits must be packed firmly, especially such delicate fruits as Peaches and Pears, and the slightest movement of these fruits in transit is almost certain to cause disaster.

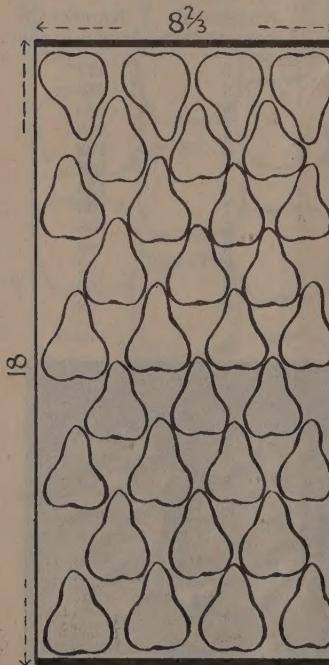


FIG. 14^A
Pears packed in tray.

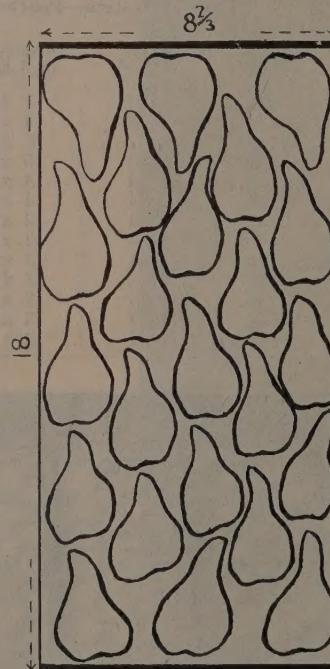


FIG. 15
Pears packed on the 3-2
System.

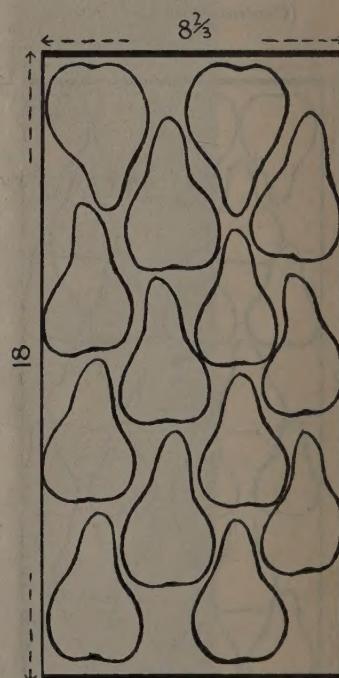


FIG. 16
Pears packed on 2-2 System.

indicate packs that will bring various sizes to correct height in case, and would be used on an average in the packing shed.

Diagonal System.

Size.	Pack.	Layer.	Layers.	No. of Total.
2½ in.	*2-2	6 x 5	8	352
	2-2	5 x 5	8	320
2½ in.	*2-2	5 x 4	7	252
2½ in.	*2-2	4 x 4	7	224
	2-2	4 x 3	7	196
3 in.	*2-2	3 x 3	7	168
	2-1	3 x 3	6	108

Next issue we will publish a ready Reckoner for Orange packing.

The Starling Curse.

A Destructive and Filthy Bird.

COMPLAINTS are still general regarding the damage done by the starlings. These voracious imported birds are not only destroying vast quantities of fruit each season, but they are also killing out our Australian native insectivorous birds.

Starlings are breeding by the million throughout Australia.

Concerted action is necessary on the part of fruitgrowers to keep the pests in check—by netting, by organised district “shoots,” by the establishment of gun clubs.

The wheat farmer rather welcomes the starling for the reason that the birds eat insects.

The fruitgrower—who is usually in districts widely separated from the farmer—looks on the starling as one of his worst pests, for the birds have

a great liking for fruit. The birds are bold and are not easily frightened.

The farmer is welcome to his pets, but in settled fruit districts the starling is a curse and a menace.

Apart from any other consideration, the starlings are filthy birds, as they breed lice, which quickly get into households infecting the inhabitants.

To Treat Lice Infestations from Starlings.

Inquiry was made by a correspondent in the “N.S.W. Agricultural Journal” recently as to a method of exterminating the lice remaining after the removal of a colony of starlings. The nests of the birds had been rooted out from under a box casing in the roof, but although disinfectants had been tried and sulphur used as a fumigant, and, despite the fact that the rooms were otherwise spotlessly clean, having recently been repainted and repapered, the household was still troubled with the tiniest black insects, the nippings of which raised large lumps.

The correspondent was informed by Mr. T. McCarthy, Assistant Entomologist, that the nesting of starlings in houses had been reported several times during the season as causing infestations of lice.

The first step necessary had already been taken in removing the nests. It was advisable to spray the woodwork and the inside of the floor of the loft with a mixture of one pint of phenol in eighty parts of water, care being taken not to apply so much

that it would percolate down to the plaster ceiling. This mixture could also be used on the woodwork in the rooms below.

Fumigation of the rooms with sulphur, if thoroughly done, should be effective if a strong charge of 4 to 5 lbs. to every 1,000 cubic feet of space were used. The sulphur should be placed in a metal vessel of such depth that it would not run over when burning, the vessel itself being placed for greater safety upon a sheet of iron. Metal objects should be removed from the rooms, or they would be tarnished by the fumes; the brass knobs of bedsteads might be protected by smearing them with vaseline. The rooms should be kept closed for at least twelve hours.

The important thing, however, was to treat the woodwork with a suitable insecticide, such as the phenol solution mentioned, or wood-preserving oil. If such insecticides were carefully and persistently applied, it might not be necessary to fumigate at all.

The Value of Gun Clubs.

It is estimated that fully 500,000 starlings are annually shot by the various gun clubs. The largest of these is the Melbourne Gun Club, at which 40,000 starlings are shot each year. There are 60 gun clubs scattered throughout Victoria.

The organisation of a gun club is very simple: full particulars are obtainable from the Secretary of the Gun Club Associations of Victoria, Mr. F. A. Tubb, Salisbury-street, Canterbury (Vic.).

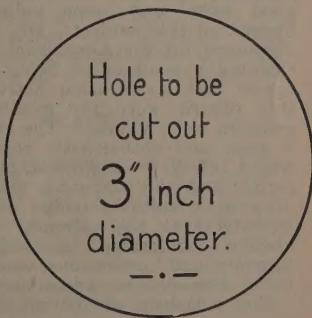
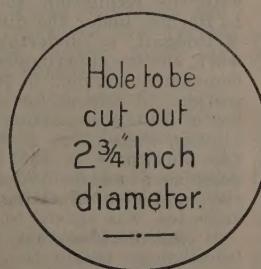
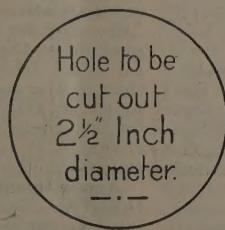
GRADING BOARD.

Hereunder we submit a suggested “Grading Board,” with packs written above each circle for use in sheds even where modern grading machines are installed. If the average packs are copied from the Ready Reckoner, as shown in the specimen below, the packer can easily bring all sizes to right height in every case, provided the correct number of fruits is placed in each layer.—In Peaches this board will be found almost indispensable. This grading board may be easily cut out from a piece of 3-ply or other material or even tin.

AN EXAMPLE.

Apple Packing in Dumps for Export.

No. of Pack Layer Layers Total Grade					No. of Pack Layer Layers Total Grade					No. of Pack Layer Layers Total Grade					No. of Pack Layer Layers Total Grade								
3-2		7 x 7		7		245	smaller	3-2		6 x 5		7		193	smaller	2-2		7 x 6		6		156	smaller
3-2		7 x 6		7		228	larger	3-2		5 x 5		7		175	larger	2-2		6 x 6		6		144	larger



AUSTRALIAN DRIED FRUITS ASSOCIATION

MEETING OF BOARD OF MANAGEMENT.
IMPORTANT MATTERS DEALT WITH.

THE RECENT MEETINGS of the A.D.F.A. Board of Management in Melbourne have been of a lengthy and weighty nature.

The January Board meeting was no exception, entailing the use of every evening and Saturday afternoon to enable the growers' representatives to finish their deliberations in order to permit Mr. H. D. Howie, the chairman, to leave for Nyah in fulfilment of a definite promise to visit that centre.

At the meeting, consideration was given to the important subject of how best to acquaint the dried fruit growers in their various districts of the steps taken in their interests by the board. Already a digest of the proceedings is being sent from headquarters to each local executive. This is being supplemented by issuing press reports, after each monthly meeting, this work being entrusted to Mr. J. B. Murdoch, a member of the board. Further arrangements for press propaganda in metropolitan papers are being taken.

Prices Reviewed Monthly.—It was decided to protect the retail buyers by the monthly reviewal of prices necessitating a fall in dried fruits. This should gain and maintain the goodwill of retailers and public alike as the grocer can immediately pass on the benefits to the consumers, should such fall come about, without loss to himself.

Interviews and Deputations.—Much of the Board's time is taken up by interviews and deputations. These matters are of so great importance to the industry at this juncture, however, that the system is a gain rather than otherwise.

Raisin Bread.—Two soldier growers of Red Cliffs, Messrs. Bailey and Gillie, enthusiastic on the claims of raisin bread as a means of increasing the Australian consumption of dried fruits, put before the chairman a good case, and some enlightening figures on this subject. Mr. Sumner Secretary for the Association, was in the happy position of being able to prove that Association activities in this regard were far greater than growers were aware. The efforts of a good and enthusiastic representative A.D.F.A. propagandist, plus show cards, and the fortunate possession of a most suitable recipe for bread manufacture, had already brought about considerable trade in Melbourne, and operations were now being extended to Adelaide.

The consensus of opinion of bakers concerned, however, was that the Sultana or seedless Lexia, rather than

the Lexia, were ideal fruits for a good and popular article.

The Export Trade.—Some first-hand and very valuable information was obtained through the courtesy of Mr. Middleton, one of Messrs. Gollin & Co.'s chief directors in London, as to past errors, and big improvements possible in London marketing arrangements. Mr. Middleton assured us that, given preference, a big field awaited our produce in Canada.

The Carton Trade.—Messrs. Turner & Kempson, a Melbourne firm of "outside" dried fruit buyers, interviewed the Board to see if some common ground could not be arrived at, whereby they could handle only Association fruit, and the proprietary carton trade they had just commenced be worked in conjunction with the system evolved for an A.D.F.A. proprietary container, which the Association were taking the preparatory steps towards launching. After discussion, a small sub-committee was appointed to meet these gentlemen, to see if mutual benefit might not result.

Marking and Branding.—A delegation from the Board attended the conference of the Federal Fruit Council of Australia, summoned to consider the matter of new Customs regulations, as to the marking and branding of boxes for export. The Council, after hearing and considering the strong case presented by the Board's representatives, agreed to strongly recommend to the Customs authorities the adoption of the system.

Mr. McDougall and Empire Exhibition.—Considerable discussion, following on receipt of valuable information contained in a letter from Mr. F. L. McDougall, resulted in the cabling to the Prime Minister (Mr. Bruce) in London, strongly urging the retention of Mr. McDougall's services in connection with the Empire Exhibition. Funds were also cabled to Mr. McDougall for Exhibition needs.

It was also decided in connection with the Exhibition, to send Mr. R. L. Barnes, under the direction of Mr. McDougall, to undertake the detail work, and the superintendence of lady demonstrators, etc., in the dried fruit section. A scheme for the direct selling of 5 lb. presentation boxes to Exhibition visitors at a flat rate, post free anywhere in the United Kingdom, as a means of valuable publicity, and also offsetting Mr. Barnes' expenses, was agreed to.

It was decided that further steps be taken to obtain the assistance of the South Australian and Victorian Governments in supplying funds for Exhibition publicity purposes.

Canadian Preference.—Cables were sent by the Board, strongly urging the completion of the Canadian preference proposals.

Murrumbidgee Irrigation Areas.—Mr. Such, representing the Leeton and Griffith growers, waited on the Board, and intimated that their growers wanted affiliation with the A.D.F.A., and were making application as soon as finality was arrived at with the Coastal Farmers' Co-op. Society, who were their present agents, and who were prepared to become A.D.F.A. distributors. The Chairman and Secretary were entrusted with the clinching of negotiation.

Insurance.—The matter of insuring fruit for growers whilst in transit and packers' hands, was referred to expert opinion for next meeting.

Publicity Campaign.—The possibility of stimulating sales of fruit within the Commonwealth along the lines of a carton packing scheme set out by Mr. Murdoch, occupied the attention of the Board for a considerable time. The outstanding points of this scheme were:—

- (1) A proprietary A.D.F.A. carton container.
- (2) Association travellers in Victoria and South Australia calling on retailers, offering cartonned and bulk fruits. Orders to be sent through the retailers' choice of merchant. Merchant to deliver true to sample in A.D.F.A. proprietary cartons.
- (3) Cost of such travellers to be met from publicity funds and travellers' efforts supported by a judicious publicity campaign.

Resolutions were framed and passed, to give effect to the scheme along similar lines to the written one submitted. Quantities of fruit were determined on to give the scheme a vigorous try out, and all sheds are expected to heartily co-operate.

A number of sheds were asked to submit quotations for packing, and were to be advised of tonnage of fruit to be held in reserve for cartoning. Messrs. Freeman & Co.'s application to become A.D.F.A. agents was granted.

To Combat Grubs.—Further steps were initiated to obtain a series of experiments in respect to combating the grub evil.

Trade with the East.—The Board recently granted an interview to the representatives of Eastern Traders Ltd. Whilst fully seized of the opportunities the Eastern markets offer for dried fruits, the Board decided that it was not within their scope to assist in the flotation of a general trading company through Association channels, it being entirely a discretionary matter for investors.

Appointment of General Manager Deferred.—The Board, after reviewing the applications received for the position of General Manager, decided that it was not expedient to make an appointment at the present juncture.

Soft Fruits Storage Experiments.

Pears, Peaches, Plums in Good Commercial Condition after Two Months Storage.

Resume of Preliminary Report by D. B. Adam, B.Agr. Sc., Department of Agriculture, Victoria.

EXPERIMENTS WERE CONDUCTED last season in the storage of soft fruits, when Pears and Peaches from the Goulburn Valley and from Doncaster, and Plums, were stored under different conditions. The results have been satisfactory and promising.

Pears.

The Pears—William Bon Chretien—were forwarded, on various dates, from several places between 30th January and the 28th February, so that, among other things, an estimate of the best time to pick was possible. A uniform system of packing in trays with wood-wool was used throughout, but some differences were made in the wrapping papers used.

Results.

While there is little difference in the keeping qualities in cool store between early and later picked fruit over a three months storage period, a very striking difference manifests itself soon after each lot of fruit is removed from storage, especially in that which has been kept at a low temperature.

The earlier picked fruit turns black in the skin in patches over the whole area, but particularly about the stalk end. This has been termed "Pear scald." The term, however, is perhaps in a way unfortunate, since "Apple scald"—a well known cool storage trouble—is apparently quite different in its causation. The area immediately subjacent to the blackened areas remains firm, while the rest of the Pear softens, as in the ordinary course of ripening; indeed, this blackening does not manifest itself until other areas in the Pear begin to soften. This accounts for its more rapid appearance after removal of the fruit from cool storage, when the rate of softening is greatly accelerated.

Secondly, Pears plucked too early showed, after a four months' storage period, a rapid break-down of the flesh. This contrasted with the comparative soundness, at that time, of fruit picked three weeks later—viz., on 24th February—which time proved the most satisfactory in every respect.

Of the various wrappers used, a single sulphite tissue paper gave the best results. In the actual cool storage process, however, unwrapped fruit possesses advantages—efficient cooling, etc.—but wilting is slightly worse, and on removal of the fruit from store its appearance is not so attractive as wrapped fruit.

The Department of Agriculture in Victoria is deserving of congratulation in continuing its experiments in the cold storage of fruit. Mr. D. B. Adam, B.Agr. Sc., who is conducting the experiments, has shown ability and energy in his work, and holds the confidence of all interested.

The report herewith deals with the cold storage of Pears, Peaches, and Plums, and marks a further stage in the investigation relating to the commercial possibilities of storing soft fruit for the Australasian and overseas markets. The article is worthy of close perusal.—Editor.

Pears picked at

the correct maturity

and placed in temperatures of 31 deg. to 32 deg. F. gave the most satisfactory results. There was no definite difference between the fruit which had been stored in the air circulation chamber and that placed in the direct expansion chamber.

Pears gathered at the correct stage of maturity and stored at 32 deg. F. will, after a two months' storage period, remain sound and firm for ten days; indeed, the flavour and juiciness are not properly developed till four days subsequent to their removal from cool store.

Comments on Results.

Possibly the point most clearly established in the experiments with William Bon Chretien Pears was the fact that the best time to pick them for cool storage is a strictly limited one in any district.

Those picked too early "scalded" or on removal broke down, and in any case did not develop the juicy aromatic lusciousness so characteristic of a good Williams Pear.

Those gathered too late seemed, in spite of a low temperature, to ripen too quickly. About Kyabram and Merrigum last year the best period for picking was roughly from the 14th to the 24th February.

A second point of importance in Pear storage established was the necessity for quickly reducing the temperature of the fruit to 32 deg. F. It is important to see that the Pear flesh right to the core is reduced to this temperature.

These two points are essentially, it is thought, the secret of successful commercial Pear storage.

Packages, Etc.

Naturally these are designed to carry the fruit in the best possible manner, but in exporting Pears on a commercial basis economic considerations and attractiveness would necessarily to some extent determine the method of packing. Shallow trays—18 in. x 14 in. x 3 in.—certainly guard the fruit against violence and consequent mould deterioration, and set it off attractively, but are expensive, and do not allow such an effective and rapid cooling of fruit when stacked in mass, as do some other packages.

No definite expression on the questions of trays and half cases for use for general export purposes can be made here, since the determining factors are largely economic.

The packages preferably should not be lined with paper, and some wood-wool, though a minimum, ought to be used.

Pears picked at the correct stage of maturity are so firm that with reasonable care in picking and handling losses from mould fungi would not be large.

For local cool storage purposes the flat bushel case (unlined) is recommended. With these the storeman has a reasonably good chance of bringing the temperature down rapidly enough to store the fruit successfully for six or eight weeks on a commercial scale.

Finally, it is a frequently expressed opinion that fruit from the south, about Melbourne, will keep better than that from the north—the Goulburn Valley. This may be so, but no evidence was obtained in favour of the idea last season. Perhaps in reality it is a question of the relative times each actually takes to get to cool store.

The importance of reducing such time to a minimum has previously been emphasized. The best picking time for fruit grown south from the Dividing Range—at Doncaster—last year was a fortnight later than for that grown in orchards north of the Divide.

PEACHES.

THE VARIETIES—Elberta, Late Red, and Early Crawford—from the Goulburn Valley, and the varieties Zerbe's No. 1, Belot's Late, Webb's Seedling, Catherine Ann, and Late Crawford from Doncaster—were experimented with last season. None of the varieties from

the north stored well. Some of the southern varieties gave most encouraging results.

Peaches in cold store generally deteriorate, for one of two reasons, viz., they become dry, spongy and flavourless, or they become mouldy. In a way, these troubles are mutually exclusive, since sponginess is a characteristic of immature fruit, and mouldiness one of fruit which is too ripe.

However, with many varieties a middle way is possible—one in which the fruit is sufficiently mature to avoid sponginess developing, and firm enough not to be bruised if handled with reasonably good care. There is some reason to believe that the sponginess is not due to loss of moisture, but rather to changes causing gelation in the individual cells of the fruit.

Elbertas were obtained in two stages of ripeness. The earlier one was labelled "Sydney condition" and the other "Melbourne condition." The latter after three week's storage was the better of the two. Subsequent to this both lots of Peaches became acid and disagreeable to taste. They also lost their juiciness.

Of the other northern varieties received the Late Reds stored best, although they also became very acid after five weeks storage. Early Crawfords were in such an advanced stage when received that they could not be stored at all.

This instance emphasises one of the great difficulties under which northern growers must necessarily labour if they wished to export this class of fruit. Indeed, to the writer it seems, in view of the fact that for best results Peaches should be well matured on the tree, that this difficulty is an insurmountable one unless cool storage facilities are established in northern localities.

Webb's Seedling, a Doncaster Peach, gave the most promising results in storage. After six weeks' storage the taste and juiciness were excellent, and remained so for eight weeks. Catherine Ann, another Doncaster seedling, also gave good results.

The maximum storage life for the fruit to remain in prime condition was, however, slightly shorter than with Webb's Seedling. No fully matured specimens of Zerbe's No. 1, nor of Belot's Late, were obtained, so that, while giving evidence of being sound storage varieties, no actual confirmation of this was made. Late Crawfords appear to lose flavour, and are definitely unsuitable for periods of longer than four weeks' storage.

Picking at the correct time, it has been noted, is probably the most important factor in Peach storage; but this "correct" time is a hard one to define, or even explain.

Some varieties of Peaches are characterised by a definite ridge which is the first area to become soft at ripening. Such a variety should be picked

just when this area is going to commence to soften. Softening should be anticipated by a day as it were, though this condition should not be tested by pressure, but rather by the eye, the use of which for this work is soon acquired by experience.

The stage at which to pick other varieties is more difficult to estimate correctly—experience alone can judge the time when the fruit is "going to commence to soften."

Having picked the Peaches in this condition, it is very necessary to give the

most careful attention to their handling, which should be the minimum required, and to its subsequent packing.

Packing in trays is recommended. The fruit should be carefully graded both as to size and colour and the trays lined with wood-wool. The fruit should be wrapped in single tissue paper and well bedded in wood-wool, with some wood-wool between each of the Peaches to keep them separate.

Trays should be separate, and cleats should be nailed on to the ends of each when putting the lid on.

Peaches sent overseas are a luxury to the recipients, who will be prepared to pay well for them. It can only be profitable to send the best fruit in the best condition as to grade and colour. The return will repay the most careful handling.

When packed, the fruit should be removed to cool store as rapidly as possible and the temperature reduced quickly. The storeman is greatly aided in an instance like this by the grower who packs his fruit when it is cool. Early morning is the best time, since the fruit has had time to cool down over-night.

Experiments showed that 34 deg. to 35 deg. F. gave quite as satisfactory a storage product as did 32 deg. F. after six weeks' storage, and at this temperature there is less likelihood of freezing the fruit by its temperature falling too low. However, to store successfully at 34 deg. F. it is essential to see that the packages have been pre-cooled right throughout to this temperature. This is the duty of the land storeman. To do it thoroughly and rapidly he should store the trays at 32 deg. F., or perhaps lower, for the short time that the fruit is in his charge.

Finally, in selecting Peaches for cool storage great care should be taken to see that the fruit is free from all trace of, or even liability to, infection from the brown rot fungus, *Sclerotinia cinerea* (Bon) Wor.

The disease caused by this fungus, while it may hardly be visible when the fruit is stored, is one which spreads rapidly in cool store, where conditions generally are very favorable for its propagation.

PLUMS.

IN STORING PLUMS, the varieties Diamond, President, Prince Inglebert, Pickering, Jefferson, and a green-gage Plum, were used. An attempt was made to differentiate results obtained from fruit stored at different maturities, but there was no appreciable difference in respect to a general softening and apparent dryness which progresses steadily with the time of storage.

The softening is accompanied by wilting; subsequently moulds develop. The variety in itself as a factor, rather than any differences in treatment, seems to be the chief one governing the rate of this softening.

Jefferson Plums remained firm for two months, though the flavour was not so well developed as in the variety Prince Inglebert, which, however, became much softer after storage. The time of picking has a more marked influence being superior in this respect. As a storage temperature 32 deg. F. is slightly better than 34 deg. F. None of the varieties stored gave a really first class product after eight weeks' storage.

Picking, Packing, Etc.

The experiments indicate that especial regard to the time of picking is not so important as with Peaches, though they should not be picked too early. A "slightly acid taste" seems best to define this condition.

Plums have been exported both in trays and in half cases. Results and reports from London agents indicate that only large attractive fruit, well packed and graded, can be profitably marketed in Britain. This, a necessarily limited trade, is best carried out with trays lightly lined with wood-wool, and by wrapping the fruit in a single tissue paper; a design thereon would greatly add to its attractiveness. The fruits need not be separated from one another as in the case of Peaches.

Summary.

Experiments of a preliminary nature have been carried out with Pears, Peaches, and Plums.

Success in Pear shipments rests as greatly with the grower, who must pick his fruit carefully and at the correct maturity, cool it quickly and thoroughly, and remove it at this temperature to the ship's side, as with the ship's engineer, who has to keep it steadily at 32 deg. F., a deed not so difficult to accomplish if the grower and his agent see to their end of the business.

Williams Pears grown at Kyabram kept in prime condition for two months, and subsequent to removal remained so for ten more days.

The best time to pick for long cool storage extended last year over the limited period, 14th to 24th February, with northern-grown fruit.

Several varieties of Peaches were stored. Those grown at Doncaster gave the most satisfactory results.

The importance of picking at the correct maturity is emphasised.

Webb's Seedling — a Doncaster Peach—gave the best results after storage. This variety remained sound for eight weeks.

Packing in trays with ample wood-wool and with great care is recommended.

After thoroughly pre-cooling the trays may be stored at 34 deg. to 35 deg. F. . . .

It is important to see that fruit for cool storage is free from brown rot. Indeed, it is inadvisable to store fruit from trees on which any of the fruit has decayed from this trouble.

Jefferson Plums stored for two months gave at that time the firmest product of a number of varieties tested. Prince Inglebert Plums retained their flavour better than the other varieties.

For export purposes only large Plums, well graded and packed in trays, are really profitable to handle.

London advices show that attractiveness in packing, etc., is, with all soft fruits, of prime importance to successful and profitable selling.

There can be no doubt that Victoria can grow good quality fruit, but many of her growers have yet to learn the art and value of care in packing this fruit.

Acknowledgment.

The writer wishes to thank orchard supervisors and several growers for much assistance given with the experiments. Special mention should be made of Messrs. Nicholls and Krone, of the Orchard Supervision Branch, and Mr. Webb, of Doncaster; the last-named gentleman, besides supplying fruit, devoted considerable attention to work connected therewith.—"Journal of Agriculture," Victoria.

PEARS FOR U.S.A.

Big Market Awaiting Development.

Mr. H. Benjafield, a well-known fruitgrower, of Gwandalan, Tasmania's Peninsula, Tasmania, writes drawing attention to the valuable possibilities in shipping Williams' Pears to America. Mr. Benjafield states:—"I have been urging this matter for a long time. Now is the time for the development of the trade, because of the present large production of Williams' Pears in our local and canning markets. I have the latest advice from America that there is a magnificent field of operations in U.S.A. for these choice Pears. We should get \$1 per case in New York, Chicago, and other places."

The Bracing of Fruit Trees.

Wires Attached to Iron Hooks.

By J. M. Arthur, Orchardist, Hawkesbury Agricultural College, N.S.W.

IT OFTEN HAPPENS that the limbs of fruit-trees extend in length too fast for their strength, and that as a consequence they are unable to support unaided the fruit they are carrying. Though this can to some extent be foreseen and provided for at the time of pruning, it becomes more apparent as the fruit swells after setting. The weakest branches first show signs of strain, and should be attended to before any breakages take place; later, as the load increases in weight, more branches may need assistance, writes Mr. J. M. Arthur, in the "Agricultural Gazette of New South Wales."

Probably from the earliest days of fruitgrowing props have been used to assist trees to carry heavy loads of fruit, and in cases where these are easily obtained from nearby bush, they may be the cheapest form of support.

The faults of the prop are that it is often difficult to give the support high enough, and the limb may snap at or above the point of support, and that the props are liable to get out of position and fail in windy weather, and may be in the way of subsequent cultivation.

If props are relied on the number should not be spared; in some cases two at one point on the branch, splayed out from one another, are necessary to provide against overbalancing during wind. Sometimes support should be given at more than one point along the same limb, and readjustment of the props from time to time often becomes necessary. A stouter prop is sometimes used to prevent the shifting by wind; it is bored at one end and fastened to the branch by means of lashing or a stout wire.

To avoid the inconvenience of props, Mr. W. J. Allen, Fruit Expert, introduced a system of bracing by means of lashing at Wagga (N.S.W.) Experiment Farm Orchard, in 1897. This method was used for many years, but, though it proved preferable to props, it had defects. The lashing often required renewing after one season, and despite that its position was shifted each year, it would sometimes cut into the limb. The latter trouble can be avoided by placing a piece of hollow scotia with the hollow to the under side of the limb, so that the pull of the lashing will bear on it, the arris of the angle of the scotia being well chamfered away to prevent chafing of the lashing. But such means are cumbersome, and add to the time of adjusting.

In 1910, while orchardist at Yanco (N.S.W.) Experiment Farm Orchard,

the writer introduced the method of bracing individual limbs of fruit trees, an iron screw hook (of fairly strong gauge for large limbs and a lighter gauge for small ones) being used with wires. It has been found that the utmost discretion is necessary in selecting the point on the limbs at which the hook is to be inserted. If put too low down, the limb invariably breaks just above the hook, and to obviate this the hook must be inserted as high as possible and the limb pruned fairly heavily above.

In instances where two weak limbs are opposite to each other and both require bracing, it is not always practicable to brace the two with the single wire across, as one or both may be pulled out of position and crowd other limbs in the vicinity. This difficulty can be overcome by attaching

two wires to a hook inserted in each weak limb, and taking the wires out at an angle from each other and securing them near the bases of stronger limbs to either side of the tree. The one set of screw hooks on the stronger limbs could generally be used for the wires from both of the weak ones.

Again, in the case where a limb on one side is weak and the one opposite is not overstrong but does not require bracing, the hook should be inserted at the usual height on the weak limb, but lower down on the stronger one, so as not to bring the limb used as an anchor out of position, and to give a greater leverage for the weak one. Brass hooks are not a success, as with much weight they generally straighten out.

At Yanco the wire used was about No. 14. The central ring described in some American publications was not used, but in many instances the securing of the bracing wires at their crossing point was tried, and it was found that not only was the system a hindrance in spraying, but also that, the pull on all the limbs not being equal, the majority of the weaker limbs were pulled out of their position by the stronger ones. This method was discarded in favour of bracing two, or in some instances more limbs individually. Up to the time of my transfer from Yanco in the year 1922, most of the hooks and wires that were attached in the first instance were still in their original position, and notwithstanding the fact that regular and heavy crops of Peaches had been produced annually, seldom had a leader collapsed. For the past eight years the Alberta variety has produced over 8 tons per acre annually at Yanco Experiment Farm.—



Dried Fruit Department



Observations on the Dried Fruits Industry in California.

(By E. J. Roberts, Irymple, Vic.)

FTER CONSIDERABLE INVESTIGATION into the methods of sterilisation as practised in California, I found that, so far, the only method that has given any satisfaction in the past is the ordinary carbon-bisulphide or carbonic-acid gas treatment. A good deal of the fruit, after it is packed, is placed in a chamber and treated with carbonic gas. This, they claim, kills practically all the actual live insects, but not nearly all the eggs.

For some time past the staff in the Department of Agriculture at Sacramento has been experimenting with the Vacuum system, and they now claim to be close to the 100 per cent. success, but as far as dried fruit is concerned, it is only experimental yet.

I spent nearly a whole day at their experimental station, where they are now installing a much larger plant to continue this work, on what may be called a practical or working basis. They hope shortly to be able to give some authoritative statements and advice to packers.

The system is being successfully used in several other lines that do not pack down as tightly as fruit, such as grain, furs, etc., in which the eggs are not so difficult to get at. I have blue prints of the plans of one of these, a twin plant, which will enable us to erect plants as soon as the experiments warrant the expense.

Recently the Peach and Fig Growers' Association installed a fairly large single plant at their Dinuba Packing House, and this will really act as a check against the Department's experiments. This plant will heat about six tons at a time, and cost about 6,000 dollars (say £1,250) to instal there.

The plant is comparatively simple, but rather expensive, as the chambers have to be strong enough to hold the vacuum. That is the main expense, the other parts being a double action air pump motor to drive it, a gauge, and a small container to hold the liquid gas, and a few pipes and valves. It takes about two hours to fill up, heat and remove each batch of fruit.

Last issue we published the first instalment of Mr. Roberts' interesting "Observations," wherein he referred to the huge extent of the Dried Fruits industry in California, also to methods of packing, selling, and emphasised his belief that the A.D.F.A. should remain a legislative and controlling body, not a trading organisation.

In the balance of the article published herewith, Mr. Roberts deals with fruit sterilisation, Raisin bread, and advertising. "Raisin" bread in U.S.A. is made from Sultanas: the importance of continued and well directed advertising is stressed.

—Editor.

If further experiments confirm those already made it is almost certain that the bulk of the Californian dried fruits will be sterilised before leaving the packing houses, and if this takes place it will be absolutely essential that Australia follows suit, especially with all our export and canned fruit.

It is claimed for this system that it will not only penetrate fruit in boxes, but fruit in ordinary cartons. I have made arrangements to keep in very close touch with the further developments of this matter.

As many of you are aware, a plant of this sort was recently obtained from America, and I would strongly recommend that the A.D.F.A. arrange to have a number of experiments carried out at various seasons of the year, as America has found that weather conditions have some effect on the results. We want to be quite sure that we are on the right thing before spending large sums of money on it, nor do we want to be behind our competitors in turning out sterilised goods.

The Sunmaid Raisin Association is discussing, and, in fact, seriously considering whether, if this treatment is successful, they should build a chamber large enough to take in a railway truck at a time, in order to save handling expenses, but it looks as if the expense will not warrant it. After discussing it with the experts of the Department, I think it would be practicable to have a chamber made with a flat floor that would take

a truck-load of fruit loaded on small trolleys, and pass them through on the way to the railway truck. In this way the handling charges would be very small.

In connection with this subject, there is another thing they are doing

to prevent infection after the fruit is packed; that is, using a tough paper bag inside the box instead of the ordinary paper lining. This is inserted in the box, and the fruit run in, and then the bag folded over before the lid is put on. This not only keeps out insects, but prevents any waste of fruit should a piece of the top or bottom be knocked off; also prevents dust or dirt getting into the fruit.

This seems a move in the right direction, and is well worth the Association's consideration. Of course it will increase the cost a little, but the packers at Fresno are satisfied that it more than pays to use these bags.

Recleaning.

At Fresno more care is taken to clean the fruit than in Australia. In the first place I might mention that the small "bits," or cap stems, stick much tighter there than with us, probably because the fruit is not dipped. They put a great deal of their Thompson's Seedless through three stemming processes.

In the first place they pass them through a horizontal stemmer very similar to the drum of a threshing machine, then blow out the rubbish and pass the fruit on to what they call a cap stemmer, very similar to our ordinary stemmer.

From that some of the fruit is packed, but in many instances it is then passed through a recleaning machine. This is made with an outside horizontal cone of very strong wire mesh, with paddles inside running between 1,800 and 2,000 revolutions per minute, and these have small jets of water playing on the outside.

This machine beats off any remaining butts of the stems, and the water washes off the dust and any dirt that may have got this far. This dirt passes on to a tray beneath, and runs into a tank, the fruit passing out on to the riddles, where what is called "Bakers" grade is taken out. It consists of fruit about the size of large Currants, and is used by the bakers and manufacturers instead of Currants.

Whether the skin of our dipped fruit would stand all this treatment is very doubtful, also whether it would keep after being damped is very questionable, and could only be ascertained by actual, and probably considerable experiment under varying conditions. In the first place, the fruit is dried much more than with us.

This recleaning certainly improves the appearance of the fruit very much, and if it would stand it, and keep after treatment, I feel sure it would be well for us to reclean at least the fruit that we put into cartons; and probably the whole of it, both from a sanitary point and because of the improved appearance.

Of course, there is a great deal more that could be said on this subject, as I am fully convinced that successful sterilisation is going to be one of the largest factors in the increase of the consumption of dried fruit. Therefore we should lose no time in pushing this matter to a successful issue. Anything further that I can I will be only too glad to do to assist in this matter.

* * * * * RAISIN BREAD IN AMERICA.

PERHAPS I SHOULD SAY, first of all, that what is sold in California as Raisin Bread is not quite what we in Australia usually mean by "Raisin Bread." As we understand this, it is bread with Seeded Raisins in it. That being our worst selling line, no doubt, accounts for our trying to use Lexias.

In America they mostly use the small Thompson's Seedless—really Sultanas. The packing houses put in a riddle with holes 21/64th inches in diameter. This takes out all the small berries up to the size of a very large Currant, and these they pack in large boxes, classing them "Bakers," and selling at a lower price than the larger fruit. This fruit is also largely used in the place of Currants in cakes and puddings. They grow very few Currants, and have pretty well induced the people to use these small Sultanas instead of Currants. It would not help us to go this far, as we have more Currants than we can sell.

The main reason for using these small Sultanas in their raisin bread is the fact that very few bakers will use the seeded Muscats. There are three reasons for this:—This fruit is hard to separate in the dough, several Raisins stick together in lumps, and make it expensive to separate them, and even when separated in the dough, they are very apt to settle to the bottom of the loaf in the oven on account of their weight.

Even those bakers who get over this difficulty say their customers prefer several small berries in a piece of bread to only one or two large Raisins. The small Sultanas are

easily spread through the dough, they very seldom settle, but stay all through the loaf, which looks much nicer, while it takes less weight of fruit per loaf to give the bread a fruity appearance. These points enable them to sell it cheaper than if they used Muscats. The price of the fruit per pound is practically the same.

If we are going to work up a demand for Raisin bread I feel sure we would do well to follow the lead of America in this matter. They have done a lot of experimental work, and we should profit by it.

There is no doubt Raisin bread is a very considerable article of food in America. Practically all the hotels, cafes, and eating houses have it, also families buy it, and a great many of the people like it and eat it. The Sunmaid Raisin Growers' Association Advertising Department say that in America more fruit is used in bread

I have also referred to this subject in my remarks on advertising as practised in America. As I have said before, I believe it is one of our best ways of increasing consumption, and we should spare no effort to push it to a successful issue, even though it should mean the selling of the fruit at a low price and spending money in propaganda. I can see no other way that has such large possibilities—everybody eats bread, and if they can be induced to eat Raisin bread, even once a week, it will mean a great many tons of fruit in a year. I commend this to everyone who is interested in the consumption of our dried fruits.

* * *

ADVERTISING IN CALIFORNIA.

BY APPOINTMENT, I met Mr. Bell, the head of the Advertising Branch of the Sunmaid Raisin Growers' Association at Fresno. He was particularly kind and anxious to help me. He believes that our interests and theirs are very closely allied, and that the more successfully we advertise the better for them, as well as ourselves. The more Raisins we induce people to consume here the less competition with them in other markets.

We had a general discussion regarding the position in both countries, and also the outlook in other parts of the world, especially Europe.

Like us, Californian growers all realise that catering for their home market is the most important.

Mr. Bell is a great believer in continued systematic advertising for such lines as fruit, the great aim being to make it an every-day food item—not like a month's clearing sale of out-of-season goods. Spasmodic advertising, he has found, is largely money thrown away. It is not enough to get the fruit out of first hands, or even into retailers' hands, but advertising, to be successful, must ensure the fruit being eaten when it reaches the consumer, and that he buys more and keeps eating it all the time.

From his investigations he found a great many families never bought any dried fruit. He is out to increase the pre-capita consumption—one pound per head increase means an increased consumption of 55,000 tons per year. A pound does not seem much, but it would just about take care of their surplus for them, for, although their crop sounds big to us, it is not nearly as much as ours proportionately to the population.

California produces less than four pounds per head of their population, while we are producing over ten pounds per head now, and by the time all the land that is either now planted or being prepared comes into bearing, our output will be something like 20 pounds per head. In this way our position is much more serious than theirs, unless, of course, we can get effective preference in Canada—which is not too promising, I fear.

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than in any other way, and they have made the pushing of it one of the main points in their advertising schemes. They believe that it is going to be a big factor in the disposal of the very large output of fruit they are looking forward to in the next few years.

From all I have seen and heard over there, I am convinced that if we go about this in a proper way, we will very largely increase our sales in Australia.

To get the full advantage of this we will probably have to adjust ourselves to the needs of this particular business. First, I think we should provide a quantity of these small Sultanas. Then we should fix as low a price as possible for this grade, taking precautions that it is not sold for counter trade. Then we should get a first class man to interview the bakers and get them interested, and having done this much, it then remains to induce the people to eat this bread, both in private houses and in the various eating houses.

If we get the people interested no doubt the trade will respond all right.

It is, therefore, far more important for us to increase our local consumption than for them. To do this he finds that advertising must be consistent and continuous, no use making a splash for three or six months, and doing little or nothing for the balance of the year. Better to go rather slowly at the first, and increase as the year goes on.

In this way, if the next crop shows light, as it has done with them in some past seasons, they will not need to trench too heavily on the new crop for funds, as they will have something in hand, and thus be able to continue consistently without too great a strain on the lighter crop. He has found that it is a great mistake to make a break in their advertising. When this was done in the past it was found that most of the initial work had to be done again.

Some time ago a very thorough investigation was made through various States to find out the ways in which the most fruit was consumed. A large number of travellers were sent out to personally interview the housewives and other consumers, and after getting the results of hundreds of thousands of these interviews, they were tabulated, and it was found that the five main sources of consumption were in the following order:—

First, Raisin Bread;

Second, Cakes, including home and shop made;

Third, Cookies and Scones;

Fourth, Raisin Pie;

Fifth, Puddings.

They then set out to advertise to reach the people who consumed these articles of food. The Raisin bread, being the largest, they thought it best to put more energy and cash into this line, and to arrange with bakers in as many towns as possible to have a special raisin day at least once every week, arranging, as far as possible, that all bakers in a district had the same day. They then inserted an advertisement in the previous day's local papers, and made it to read as if it were inserted by the interested bakers, on some such lines as "Tomorrow is Raisin Day. We are baking this especially for our customers who want it. Be sure you order your supply, etc., etc.," in such a way as to create a desire on the part of the customers to have Raisin bread for that day.

The whole effort of the advertisement was to make people feel they would miss something if they did not have Raisin bread for that day at least, and to make them feel that the baker was making it to please and oblige his customers. They found very marked results from this, but, like all other classes of advertising, it has to be continued if the demand is to increase, or even hold up.

They also found that striking hoarding advertisements were very hopeful, not only for Raisin bread,

but they were good as general advertisements of Raisins, but they had to be striking in appearance or they were lost amongst so many others.

For home-made cooking they found that journals, such as the "Ladies' Home Journal," with coloured plates and good recipes—was one of the best ways, as these are read very extensively by the class that can afford to use dried fruits freely, and who like good home-made cakes.

These and local newspaper advertisements, for those who don't read journals, seemed to give them the best results in the home use of the fruits. They also found that it was better to appeal to the taste and the eye rather than to the question of health or muscular strength to be obtained by eating the fruit, only working the latter in casually. — He was very insistent on good sound advertising in which the taste is appealed to.

Try to make the people's mouths water for the nice things that can be made from dried fruits; make them feel they are missing something until they get your fruits. Create an appetite for the goods, then be sure your quality is right. Finally, see you can, and do, deliver the goods. He stressed these points all the time.

The five-cent packets he thought were good only as an introduction, and not as a lasting thing. Window displays, he believes, are amongst the best advertisements, provided that they are nicely done, and by the grocers, particularly those who supply the masses. He prefers grocers' to show windows in other shops because the grocer can deliver the goods right away. People look at them in other windows, talk about their nice appearance, but pass on and forget to order when they go to the grocers.

Guessing competitions and showy stunts Mr. Bell does not think are worth what they cost, as generally with the former the people are thinking of the prizes, not eating fruit; and publicity stunts are usually publicity for the man, not for the goods he is supposed to be advertising. While these things are sometimes useful to begin a campaign, they do not give much results, and he does not favour them.

The Sunmaid Raisin Growers' Association is spending very large sums of money each year in advertising. They have a considerable trained staff doing nothing else but attending to this business. Of course, they have a very large tonnage to draw against for funds, but largely it is only a question of proportion, as they have a very large population to work on.

The more I think of it the more certain I am that

we must advertise freely if we are going to keep the industry from collapsing.

Not only must we advertise in Australia, but we must advertise outside so as to find other markets, as

there is no hope of inducing our own people to eat anything like all our production. Outside markets must be found and held.

DRIED STONE FRUITS AND PEARS.

New Season's Prices.

Substantial Reductions.

The Australian Dried Fruits Association has issued its prices for new season's Apricots, Peaches, Nectarines, and Pears. The schedule discloses a general reduction. Apricots will be 4d. lb. cheaper; whole Apricots, 4½d. down; Peaches, 2d.; and Nectarines, 3d.; contrasted with the opening prices of last year. Quotations compare with those of preceding seasons as follows:—

	1921.	1922.	1923.	1924.
Four crown	1/8	1/8	1/7	1/3
Three crown	1/7	1/7	1/6	1/2
Two crown	1/6	1/6	1/5	1/1
One crown	1/5	1/5	1/3	0/9
Plain.	1/2	1/2	1/-	0/6
Slabs.	1/5	1/5	1/4	0/10

Whole Apricots—

Four crown	1/2	1/2	1/-	0/7½
Three crown	1/1	1/1	0/11	0/6½
Two crown	1/-	1/-	0/10	0/5½

Peaches—

Four crown	1/4	1/4	1/2	1/-
Three crown	1/3	1/3	1/1	0/11
Two crown	1/2	1/2	1/-	0/10
One crown	1/-	1/-	0/10	0/8

Nectarines—

Four crown	1/8	1/6	1/4	1/1
Three crown	1/7	1/5	1/3	1/-
Two crown	1/6	1/4	1/2	0/11
One crown	1/5	1/3	1/-	0/9

Pears, 28lb. boxes—

Four crown	1/4	1/4	1/4	1/2
Three crown	1/3	1/3	1/3	1/1
Two crown	1/1	1/1	1/1	1/-

The above prices are for Adelaide, Melbourne, Sydney, Newcastle, and producing centres (except Fremantle and Perth), plus the usual additions to prices for shipment to other ports.

In announcing these quotations, the secretary to the Association (Mr. W. N. Sumner) states that one of the most important duties which the new board of management of the A.D.F.A. has to undertake is the monthly review of the prices of its products. This is a most important step, which will keep association prices under careful watch so that the public shall have every consideration in respect to fluctuations during the season. To provide machinery which shall be equitable to consumer and retailer, and to facilitate the monthly review, the board proposes to adopt a system whereby the retail grocer operating in association fruits shall be protected from loss, in view of any set of conditions bringing about a drop in prices of dried fruits. This will be done on the distinct understanding that the grocer passes reductions on immediately to the consumer.

EAT MORE RAISINS.

Useful Propaganda by Victorian Railways Department.

In order to be of assistance to primary industries, the Victorian Railways Department is continuing its excellent and well directed propaganda.

A handy pamphlet has just been published and sent broadcast throughout the State—the slogan is

Every day—in every way—Raisins.

(This slogan, by the way, is painted in large letters at the main entrances of the Melbourne Railway Stations.)

The pamphlet just referred to states—

When you travel, when you take exercise, eat Raisins. They are strengthening, sustaining, and energy-restoring: Thirst quenching, nourishing, delicious. Take them with you, always—everywhere.

Some Delightful Ways in which Raisins can be used.

Equal amounts of chopped Raisins and nuts, moistened with Orange or Lemon juice, make a delicious and nutritious sandwich filling.

An easy and nutritious marmalade may be made by cooking equal parts

of chopped Raisins, Apples, and water till thick, and adding a little Lemon juice.

Chopped Raisins and Horseradish make a splendid relish to serve with meat.

Add a few Raisins to the poultry stuffing and you will never again omit them.

Chopped Raisins added to scalloped Apples give an unusually distinctive flavour.

Add a few chopped Raisins to Hamburg steak or to any meat croquettes. There is no loss in food value, and the flavour is improved.

Put a few Raisins in the children's breakfast food. They will like it better, and get added nutrition.

A cup of chopped Raisins, $\frac{1}{2}$ -cup of sugar, and a little Lemon juice make a delicious and inexpensive tart filling.

Stewed Raisins lend new charm and zest to cereals of all kinds—increase nutrition and add healthfulness.

Rice pudding with Raisins is an almost universal favourite of the men. Let your men folk get their "iron" in this tasty dish.

Hot fruit toast—delicious toasted Raisin bread—is a dainty and nutritious food for breakfast, luncheon or tea.

THE THRIPS PEST.

This year, all over the Commonwealth, we have been suffering from a severe attack of many garden pests, especially summer pests. Such insect pests as Jassids, Rutherford Bug, Harlequin Bug, and Thrips have been more than usually prevalent. It seems to be one of the "bad" years, for these pests seem to come in cycles.

Perhaps the most insidious of all these pests is the Thrips, a small active flying insect, with an omnivorous appetite.

In winter it lives in the ground or among rubbish, debris, and plant remains of all kind. Even at that season the insects are moving and feeding, thriving on plant refuse. Then when the hot weather comes, they multiply with great rapidity, and are exceedingly active.

It is safe to say that during the past Rose season, millions of Rose buds never opened, but simply perished as a result of Thrips attacks. And not only have flowers suffered, but the plants themselves have suffered as a result of the attacks on the foliage.

Thrips not only live on plant refuse, and on the pollen and sap of the reproductive organs, but as well they suck the sap from foliage. To nurserymen this is serious; and many a grower of Rhododendrons and Azaleas has found that this pest makes serious ravages on the leaves of these special plants.

A cold snap in the weather is often helpful in killing off large numbers of the insects.

Many remedies have been tried, but Mr. C. French, Jr., Government Entomologist of Victoria, has found that a spray of Benzole Emulsion is more efficacious than anything else. The insects are somewhat hard to reach, as their natural instinct is to hide, and while feeding on the underside of the leaves, they are not readily attacked.

The spray of Benzole Emulsion should be repeated several times, if necessary, and every effort should be made to wet the under surfaces of the leaves with the spray. Clearing the ground of debris will also be helpful, especially in relation to checking the over-wintered broods.

THE COUNTRY'S CONTRIBUTION TO THE COMMON WEALTH.

Australia is the greatest wool-producing country in the world; it produces cattle and meat of the highest quality; its wheat, being a hard, high-grade type, is much sought after by the world's millers; in maize production per acre it has established a world's record; its dairy products are second in quality to none within the universe; and it can produce temperate and tropical fruits of quality which no other land can excel. All this is due to the energy, enterprise, and resource of the primary producer, and here are the figures showing the country's contribution to the common wealth for one year:—

Fruit	£6,417,382
Vine products	2,792,771
Farm yard and dairy produce	44,416,854
Hay	18,172,462
Wheat	35,154,664
Agricultural products	81,889,700
Pastoral products	69,269,952
Barley	1,139,730
Maize	1,977,986
Oats	2,007,992
Potatoes	2,104,771
Bacon and hams	3,581,716
Butter	18,812,768
Cheese	1,435,777

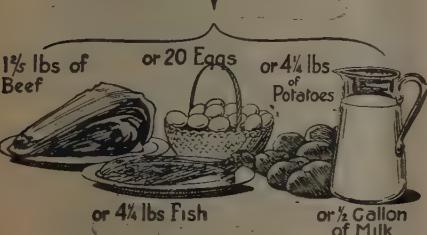
A table of national production like that serves to emphasise the rural producer's importance in the community—an importance often underestimated by urban interests—it serves as a reminder that, to the rural producer is due Australia's present eminence among the world's producing nations.—"Queensland Agricultural Journal."

AN APPRECIATION.

Junortown, Vic.,
22/1/24.

We have been getting the "Fruit World" regularly for many years from our newsagent. I must compliment you on publishing such a reliable and valuable paper.—Yours sincerely.

Robert Taylor.



RAISINS ARE RICH IN NATURAL FOOD IRON

FAR SUPERIOR TO ALL FORMS
OF ARTIFICIAL SWEETMEATS

GET THE RAISIN HABIT FOR HEALTH'S SAKE

Organising Fruitgrowers.

Success in New South Wales.

Settlers at Griffith (Murrumbidgee Irrigation Areas) are Working on Progressive Lines.

Fruit Canning and Drying Notes: Successful Fresh Fruit Train.

THE ORGANISING OF FRUIT-growers and the marketing of fruit continue to be topics of first importance amongst producers.

It is therefore of interest to place on record the successful enterprise of the Griffith (N.S.W.) Producers' Co-operative Co. Ltd.

The Committee of the Fruit Section reports that the progress made during last year has been encouraging to all concerned, and the support accorded to the efforts of the Company is very gratifying.

During the coming year a considerable accession to the ranks of the Producers' Company is anticipated, as a number of the earlier repatriated men will be harvesting the first of their fruit, and, it is hoped, will be distributing it through the Co-operative channel.

Arrangements have been made by the Water Commission, whereby advances of £25 will be granted to those producing settlers who are desirous of joining an approved Co-operative Company. Finality has been reached in regard to the agreements to be entered into between the Commission and the settler, so that all that now remains is for the necessary application to be made to the Commission for an advance.

All members of the Fruit Section of the Company are asked to subscribe a minimum of 50 £1 shares, of which £25 is to be paid on allotment and the balance at the rate of £10 per annum, or by a levy of 5 per cent. on the fruit passed through the hands of the Company, whichever is the larger.

With the increase in capital, it is anticipated that it will be possible for the Company to provide additional facilities in the way of buildings, plant, etc., which will place it in the position of being able to handle the whole of the crops now in sight from producers during 1924.

The Outlook.—Prophesying with regard to fruit matters is a very doubtful and thankless task. There are so many factors which are subject to change without notice that it is difficult to do more than generally indicate the prospects, but so far as can be seen to-day there appears

no trouble likely

to arise in marketing our fruit crops. All Canning varieties of Peaches and Apricots are provided for, either by sale to Sydney buyers or to the Leeton Cannery. An outlet has been found for all Plums and Figs for jam

making, whilst the continued success of our country trade will furnish an outlet at remunerative prices for the various odd lots, provided growers are prepared to pick and pack them in the required condition.

The setting of the Oranges has proved to be somewhat lighter than was anticipated, but is generally better than last season. Reports from the coastal districts indicate that there is no large crop there this year, so that it is quite likely prices will be good.

Grapes of all kinds appear to have set a record crop and now that we have passed through the dangerous time in which damp weather could seriously affect the yields, we may be fairly safe in assuming that the fruit now set will be harvested. There is no reason to believe that prices will be materially lower than last year, although the declaration of prices by the Winery has yet to be made.

Strong effort should be made by all growers to resist any attempt made to reduce prices below their present standard, and only concerted action will be of any value in this connection.

Fresh Fruit Train.—An experimental train was sent out on December 20th, its load consisting mainly of Apricots with a few Plums and Peaches. The venture was well advertised in advance and sales were effected from Stockinbingal to Parkes at all stations and sidings where the train stopped. The success of this method of distribution was phenomenal. Before a few stations had been passed it was necessary to ration the buyers, but notwithstanding this, when Parkes was reached, some 300 or 400 expectant buyers had to be satisfied with about 20 cases. It is estimated that at least three times the quantity could have been sold. The prices obtained were fully equal to Sydney rates.

As a result, it is proposed to run a further two trains during January with Peaches, Plums and, if obtainable, Grapes. The Peaches will, of course, be Elbertas. Upwards of 2,500 cases will be required, and such cases will have to be packed by growers. The quantity of fruit renders it impossible for shed packing to be resorted to and the full co-operation of members will be necessary if the quantities required are to be obtained. The smaller sizes of Peaches are preferred, leaving the larger sizes to go to the Sydney market or to the cannery.

Elberta Peaches.—We have now arranged with the Leeton Cannery to take all the Elberta Peaches offering for canning, so that there will be no imperative necessity for drying. In this connection, however, it should be remembered that many of the Elberta growers, tired of receiving unsatisfactory prices for their dried fruit, do not propose to dry any quantity, added to which considerable areas have been worked over. These remarks apply not only to Griffith but to other fruit producing centres.

It appears reasonable, therefore, to assume that a limited quantity of Elberta Peaches could be profitably dried and readily disposed of through the channels which have been used in the past.

The sales of dried Peaches last year by the Coastal Farmers' Society were considerably in excess of the previous year and whilst there is no carry over this season of Area fruit last year there was a considerable amount not disposed of when the new season began.

Canning.—As mentioned before, the crop is well provided for. The Leeton Cannery is to be extended, if necessary, to handle the whole of the Area crop, both for Griffith and Yenda. A local canning pool has been formed, with a representative from Griffith and one from Yenda, two from Leeton and two officers of the Commission. The Chairman is Mr. E. J. Polkinghorne and the Secretary Mr. J. Youll. It has been agreed that all expenses of operating the pool, including the extra cost of handling the fruit at Griffith and Yenda which Leeton growers ordinarily would not incur, will be shared equally on a tonnage basis by all suppliers to the Cannery.

Deductions on the scale of last season are most improbable as this year the fruit will be accepted by the Cannery at Griffith so far as quality is concerned and any deduction which may be necessary will be made as the grower passes his fruit into the shed. There will be no waiting for days to ascertain whether the quality is what is required or what deductions, if any, are to be made.

Further, payment will be on a very much more prompt basis. It is anticipated that within the first fortnight of the month following delivery, payment in full will be made. This season we are dealing direct with the Water Commission and not with the Federal Government, who muddled things so thoroughly last year that the final payments for last season's fruit are not yet made.

Provision has been made also for a certain proportion of the fruit of canning quality to go to Sydney at pool prices, thus enabling deliveries of freshly picked fruit to be made every day in the week, instead of only on three days as is necessary for Leeton.

Although it is hoped that there will be very few small canning Peaches available this year owing to the general lightness of the crop, arrangements have been made possible which all undersized fruit, provided it is sound and ripe, can be disposed of at a round £5 per ton.

Attention is directed to the fact that the Commission have agreed to pay £10 per ton for some of the shyer bearing varieties such as Sims, Lewis, Phillips, and Golden Queens. Californian Clings, Goodman's Choice, and Pullan's are valued at £9 per ton.

It is very necessary, if growers expect proper conservation of their interests by the Commission, that sales of these intermediate higher priced Cling Peaches shall not be made to outside buyers. Already the Company has been approached to pick the eyes out of the crop for Sydney Canaries, leaving the more undesirable varieties to go to Leeton. The manifest unfairness of this will be apparent to all.

No doubt it is very attractive to be able to sell a small quantity of fruit at a slightly higher price without any obligation to pick with discrimination or to have the fruit inspected before acceptance, but there is an overwhelming balance against this practice and even the most self interested grower must realise it.

Prunes.—The Annual Conference of Prune Growers was held in Griffith in December, but, unfortunately, only a few Griffith growers were able to attend. Delegates were there from Young, Koorawatha, Coolamon and Sydney. The membership fee was reduced from £1 to 5/- and a levy of 1 per cent. on the value of the fruit was struck in order to finance the organising and propaganda expenses which will be necessary if the Prune Growers are to continue to receive adequate returns.

It may not be generally known that from 2d. to 3d. per lb. is the return to American growers of Prunes who are thus able to export Prunes to Australia, to be sold here at 9d. to 9½d. per lb., notwithstanding the heavy duty. Only organisation will enable us to eliminate this competition, whilst the increasing production of Prunes is such that it will be essential for the consumption in Australia to be increased materially if an outlet is to be found.

It is anticipated that in 1925 the first effects of the heavy plantings in 1918 and 1919 will be felt. It behoves all Prune growers to join up with this Association without delay.

Angelina Burdets.—These, we understand, are being dried in expectation of the same return as for Prunes. Growers are notified that this Plum does not make a Prune, and it is not classed as such by the A.D.F.A., the Prune Growers Association or the wholesale grocers. It

can only be sold as a dried Plum and with the increasing quantity of genuine Prunes on the market, prices are not likely to be very high. The Angelina Burdett well packed finds a ready sale on the Sydney market as fresh fruit, and any excessive quantities are bought up by the jam factories at from £5 to £7 per ton. Our country trade will also take Angelina Burdets in considerable quantities.

Fumigation.—It is to be regretted that so far growers have not signified their intention of fumigating. So far only 8 acres have been promised, and this will be insufficient, we think, to induce the Leeton contractor to come over. Any growers, therefore, who have not yet approached us, are urged to immediately communicate with the shed as time is running short now to make final arrangements. In any case, if local growers cannot get their citrus trees fumigated, they should not fail to use red oil spray in February.

Ohanez Grapes.—A meeting of growers of these will be called at an early date and all those interested are urged to attend. The crop is very heavy this year and organisation is necessary to dispose of it in conjunction with other growers in Australia.

Mr. W. E. Barrett, fruitgrower, of Orange, N.S.W., is completing chambers for the cold storage of fruit this season.

Our Front Cover.—The picture on our front cover shows a view in the vineyard of Messrs. Barrett Lennard's Vineyard at "Belhus," Upper Swan, W.A. This firm has pioneered the export of Ohanez (Almeria) Grapes from Australia.

We have received from Messrs. Barrett-Lennard Bros. several interesting photos, depicting features connected with the Ohanez Grape industry in Spain, which we expect to publish next issue, together with additional details regarding the progress of the industry in Australia.

FOR PRIVATE SALE

A Handy Little Orchard Property

23 ACRES FREEHOLD LAND, 11 acres planted with Soft Shell Almonds, Brandy Jordan Almonds, King David Apple, Delicious Apple, Granny Smith Apple, 150 assorted Pears, 25 Oranges and Lemon; well fenced and wire-netted, watered by wells and permanent spring. Situated within ½ mile from town and railway.

Full particulars from

W. E. FLANAGAN & CO.,
Auctioneers, Wangaratta, Vic.

SELLING FRUIT IN ENGLAND.

Auction v. Private Sales.

A correspondent (Mr. H. G. Colombe, of 115 Hotham-street, East Melbourne, Vic.) writes:—"I have never read a statement so calculated to mislead as that contained in the advertisement in the last paragraph of page 44 in January "Fruit World": hence this correction."

[This refers to the resale of Oranges by Geo. Monro Ltd. by private treaty, after the fruit had been purchased at auction by speculators.—Ed.]

"The paragraph objected to infers that all Australian Oranges consigned to other agents were sold at auction to none other than speculators, all of whom resold these Oranges at a profit through your advertisers. This is very far from the facts of the case. The auction returns for 1923 compare more favorably in every way with the private treaty sales of 1922. After years of experience of both systems, I unhesitatingly recommend Australian growers and shippers to send their consignments to the recognised fruit brokers selling at auction. The U.K. overseas fruit trade has only assumed its present stupendous proportions by reason of the methods adopted by these brokers. Hamburg made its rapid strides simply because it followed the U.K. auction brokers' system.

"One word about Messrs. M. Isaacs & Sons Ltd., who are implicated in your advertiser's statement. They were the pioneers of the overseas fruit trade in the U.K. Their firm is close on a 100 years old. They know the fruit business thoroughly, and are highly reputed.

"The yearly importation of Oranges in London numbers several million bushel packages, of which about 80 per cent. are sold by auction in the City Sale Room, where the attendance of buyers runs into hundreds. The bulk consists of Spanish Oranges, whose shippers have resident representatives in England during the season. They know all about the fruit trade, and the manner in which overseas fruit is handled by private treaty salesmen and by auction brokers. It is a fact that their consignments have ever been, and still are, consistently sold in the City Auction Room. No comment is needed.

"It is easy for anyone to assert that either system is the better, but I am ever ready to back my assertion by more logical and convincing arguments than those adduced by your advertisers.

"(Signed) H. G. COLOMBIE."

Fruitgrowers and the Sugar Burden.

THE SUGAR EMBARGO HAS CAUSED A LOSS TO FRUITGROWERS OF £500,000 THIS SEASON.

DESPITE THE FACT that the Commonwealth Government has granted a bounty of £139,000 to the fruit industry for the present season, the grower of canning and jam fruits is still menaced by continued embargo on sugar.

It is all very well for politicians to speak of organisation and co-operation amongst soft-fruit growers; their utterances are mere empty platitudes in view of the fact that there is a continued embargo on the importation of sugar.

Fruitgrowers have been told that they cannot expect any further assistance from the Government after the present season.

The answer is quick and emphatic. So long as the Government retains the embargo on sugar, or creates an artificially high price so long must the fruit industry receive assistance.

The "favors" have too long been granted to the sugar industry.

We disclaim any suggestion of being antagonistic to the sugar industry, which is an important and prosperous one, but we affirm with dignity and emphasis that the imposition of the embargo—first imposed as a war measure—has operated disastrously to the fruit industry.

Statistics may be cunningly manipulated in an attempt to becloud the issue, but the great broad fact remains that the price of sugar is very much higher than pre-war. Sugar lands are booming; the price of fruit for canning and jam making has seriously depreciated, and orchard values have heavily declined.

The trade in jam (which is 50 p.c. sugar) has seriously dwindled in its volume of local and overseas trade; it is a luxury now instead of being on the meal table of the masses of the people.

Not only has the duty on sugar been increased from £6 to £9/6/8 per ton, but the importation of sugar has been prohibited.

The apologists of the sugar industry, when referring to the fluctuating price of the world's parity for sugar, have acquired the habit of selecting periods when the price is temporarily high, forgetting or conveniently overlooking the fact that purchases would only be made when the market is favourable.

Just prior to the opening of the present fruit season, the price of Java sugar c.i.f. Australia (excluding the duty of £9/6/8 per ton) was under £20 a ton.

The embargo caused a burden of

£500,000 to be placed on the backs of fruitgrowers for this season.

Mr. H. Tate, general manager of the Stanmore Canning and Preserving Co. Ltd., in a recent interview, stated that the sugar burden of £500,000 was too heavy for fruitgrowers to carry. Freedom to import sugar, paying the Customs duty, would restore the industry.

"Through Government interference," said Mr. Tate, "orchard lands have depreciated in value fully 50 per cent. Until six years ago the fruit industry was in a flourishing condition; every grower was actively canvassed by canners and jam manufacturers in competition to secure fruit. At that period a grower received on an average about £12 a ton for his produce. With the value of money less, and the cost of production more, the canners and manufacturers are unable to make any offer for fruit.

"The price of Java sugar, c.i.f. Australia (excluding the duty of £9/6/8 a ton), and delivered to factories in Sydney and Melbourne, was, at the opening of the season, under £20 a ton. The cost of Australian sugar delivered to similar factories is £35/15/3. The amount which has to be paid by the fruit industry toward protecting the sugar industry is therefore approximately about £500,000.

The Australian sugar has passed through one further process of refining than that of Java, and the cost of that process is about 10/- a ton. Jam manufacturers claim that this final process only makes the sugar a little whiter than the Java sugar, but in effect sacrifices quality for appearance. The Java Sugar is actually more suitable for the manufacture of jam.

"The question of standardisation, although an important factor in developing markets abroad, and increasing local consumption, need not be regarded as the only factor. Some months ago," said Mr. Tate, "we were allowed a drawback of £15 per ton on sugar content of all jams exported. Since, however, the new Queensland Sugar Board has been formed, we have approached them several times to fix the rate of drawback for a term of three months to enable Australian manufacturers to quote firm export prices. This day, however (9/1/24) we are in receipt of a communication to the effect that, as from January 1, the rate of rebate will be 13/- a ton only.

"The position will be readily under-

stood when it is pointed out that in October the rebate was £15, November £11, and December 73/- per ton. We are now 'out of court' so far as export business is concerned. If we quote an export price in good faith it may be upset in a week's time by a decision of the board.

"Almost every proposal for financial assistance made on behalf of the growers for the current season is based on assistance to the amount of about £125,000, and it is obvious that a complete solution of their troubles would be obtained, and the industry placed on a most profitable basis, if absolute freedom were obtained regarding the importation of sugar. The industry would be £500,000 better off this year, and such a reduction could be made in prices as would readily absorb the production.

"The Associated Jam Manufacturers and Canners have told the Government that under the present sugar conditions they cannot handle the whole of the jam and canning fruits. In the arrangement which the Government has recently made they have provided for Apricots, Peaches, Pears, and Pineapples, but what is to become of all the other fruits used for jam-making? The late Minister for Customs, when making arrangements with the canners for the last pool, very wisely demanded a guarantee that they would take care of all jam fruits, if he protected Apricots, Peaches and Pears by a pool. No such action has been taken by the present Government.

"The Associated Manufacturers clearly told the Prime Minister that, to be in a position to offer the growers reasonable prices for their jam-making fruits, they should have the right to import their own sugar, paying, of course, the increased duty fixed by Parliament.

"Clearly the solution of the whole trouble is for the Federal Government to allow the fruit industry to import its own sugar at the world's parity, so long as it pays the protection duty of £9/6/8 per ton.

"The fruit industry should then be in a position to organise itself, and not have to rely upon the Government. The Government would be out of the business, which is all the help the industry requires. Such an arrangement would attack the problem at its root, and should place the fruit industry in a self-reliant position."

In reply to the foregoing statement, published in the Sydney press, replies have been made by Mr. W. H. Doherty, General Secretary of the United Cane Growers' Association, and Mr. G. H. Pritchard, Secretary of the Australian Sugar Producers' Association. The former, by strange reasoning, states that "it takes 17,190 tons of sugar to satisfy the wants of the fruit industry," and again "our sugar is not a handicap to fruitgrowers."

It may interest Mr. Doherty to

know that it takes 60,000 tons of sugar to satisfy the wants of the fruit industry, allowing for the quantities needed by factories and by housewives, and that the present regime of sugar control is a very severe handicap to the fruit industry.

Mr. Pritchard, in his usual florid and swashbuckling style, flourishes a tin sword to deal what he terms a "sledgehammer blow."

He quotes the present price, and not the normal purchase price for sugar, which at once takes away all the value of his statistics and the misleading figures which he stews up from a feeble article in the "Australasian." And because the Rosella Preserving Co. made a profit out of pickles and sauces, and Sir Henry Jones stated that the Government had planted too many orchards, therefore the price of sugar could not possibly affect the fruitgrowers.

Quite so, quite so. But then people

'Phone Central 8479

F. W. Vear

*Fruit Importer
and Exporter
COMMISSION AGENT*

**49 WILLIAM ST.,
MELBOURNE, VIC.**

Solicits consignments of APPLES,
ORANGES, BANANAS, PINES and
all other fruits.

Account sales with cheque daily.

have long ago learned to take Mr. Pritchard and his sugar-refining friends with a grain of salt.

* * *

It is a thousand pities that two great industries—sugar and fruit—should be continually at loggerheads, with political wire-pulling ever in the background.

When will Australia begin to learn some much needed lessons in self-reliance?

Sound Citrus Proposition

For Immediate Sale

OWNER GOING ABROAD.

Choicest Land in District.

Five-Roomed House, with every convenience.

Ideal Situation. Splendid Prospects.

"CITRUS," c/o W. B. CRANG,
Land Agent,
WENTWORTH, N.S.W.

Fruitgrowing Under Irrigation

MANURING CITRUS GROVES : COVER CROPS
ARE DRIED NECTARINES PROFITABLE : ITEMS OF INTEREST

(By Our Special Correspondent.)

DURING THE MONTH of December and the early part of January the weather was very changeable, temperatures rising to well above the century, and then rapidly falling. On the whole, the cool weather has predominated, consequently the ripening of the Apricots has been delayed.

The crop of Apricots, which is particularly light, has ripened very slowly, there being no great rush of fruit at any period. The sample of fruit is all that could be desired.

The Peaches (Early Crawford's) are just beginning to ripen (middle January) the crop will be fair to good, the quality of the fruit is very good. In most cases where but little pruning was done, and poor cultivation methods followed, the trees may be carrying a big crop, but the size and quality of the fruit are poor.

The Dried Peach has in the past been somewhat slow of sale, and it behoves all growers, in their own interests, to produce and market only the best article.

The Nectarines are also beginning to ripen; the Goldmine holds its own on the River Murray as a drying variety. One begins to wonder if the Nectarine is a profitable venture as a dried fruit proposition upon the Murray Irrigation Areas.

One hears so many reports upon this fruit from different centres that the impression left is that it is a doubtful cropper.

In the early years the tree seems to carry heavy crops, and after six or seven years the results are very varied.

I am sure, if readers care to send in their experiences with this fruit, some very helpful data would be collected in relation to this fruit as a drying proposition. One thing is certain, that on Mallee land, especially where the limestone rubble is close to the surface, the trees are not long lived.

Cultivation.—The keynote of success during the coming months is cultivation. Keep the scarifiers and harrows going, and destroy all weeds.

Manuring Citrus Groves.

The citrus trees will be making new growth in the early autumn. Growers are advised that that time is a desirable one to fertilise the trees.

Bonedust can be applied at the rate of 2 to 4 cwt. per acre, superphosphate at the same rate, sulphate ammonia and nitrate of soda from 1 to 3 cwt. per acre, sulphate of potash from $\frac{1}{2}$ to 1 cwt. per acre.

These fertilisers can be given separately or in combination with each

other; one must experiment more or less to find out which combination will best suit their particular trees and land.

As a general rule, complete fertilisers will give the best returns. These can be purchased ready mixed or one can mix his own according to requirements.

On the whole, it pays better to mix the fertilisers at the orchard, the ready mixed are not usually rich enough in nitrogen to give the highest returns from trees.

A good basis to start on would be about—

3 cwt. superphosphate,
 $\frac{1}{2}$ cwt. sulphate of ammonia, and
 $\frac{1}{2}$ cwt. sulphate potash.

These quantities should be applied twice during the year, in the autumn and the spring.

Green cover crops should also be planted in early autumn, say, from the end of February to the end of March.

These crops are often sown too late, consequently are not ready to turn under until September, or even October, with the result that they dry out the land: the crop is ploughed under, the soil turns up lumpy owing to its dry condition, the plants are slow in decaying, owing to the lack of moisture. These conditions tend to make the soil more or less open, consequently it dries out readily, and does give the returns one is led to believe will result from green manuring.

The crops should be sown early, just prior to or following upon an irrigation, or just after a good rain.

This method will insure a good germination of the seed, and will assist the young plant to establish a good root system.

Early sowing means that under ordinary conditions that the plants are ready to plough under in July and August, they should all be turned under by the end of August.

Legumes should be sown; either Tick Beans or Field Peas are recommended. The seed should be sown at the rate of 1 bushel per acre, at the same time giving liberal dressings of either superphosphate or bone-dust, or both, say, 3 cwt. of fertiliser per acre.

CITRUS GROWERS' CONFERENCE

An important Interstate Conference of citrus growers was held at Melbourne, commencing on January 29th. Many matters of importance to the citrus industry were dealt with. A report will be published in our next issue.

Rootstocks used by California Nurseyermen during 1922

(By MYER J. HEPPNER, Assistant in Pomology, University of California.)

DURING the season of 1923 the writer sent a questionnaire to practically all of the large nurseyermen propagating deciduous fruit trees in California in order to determine what rootstocks they used for the different fruits during the year 1922. The survey met with the approval of the nurseyermen as was evidenced by the large number of answered questionnaires returned.

Two vital points were brought out by the survey.

1st. The proportion of root stocks used for each kind of fruit is not the same as it was in 1917, 1918 and 1919, when similar surveys were made by Dr. W. L. Howard, of the Division of Pomology, and

2nd. Nurseyermen do not agree as to the relative merits of the various root stocks.

The first can possibly be accounted for by the fact that growers are getting away from the traditions of the past and are now making their own observations as to which rootstock is best adapted to their conditions. In other words, the competition in fruit-growing has become so keen that the grower thinks twice before ordering his trees on a certain stock. He cannot afford to make a mistake in selecting the foundation of his orchard.

As has been seen time and time again, many growers "have gone to the wall" due to the selection of the improper rootstock for their trees. The California horticulturist has come to a point where he finds it advisable to discard the rules set by his forefathers.

Like many other enterprises, the business of fruit production is changing from year to year and in order to keep pace with these changes the successful orchardist must change his viewpoint so as to fit in with these conditions.

Before the advent of irrigation the orchardist did not have to worry about any rising water-table drowning out the root system of his trees. To-day this question must be given a good deal of consideration. There are certain rootstocks that can withstand "wet feet," while to other stocks this would mean destruction.

This is one example of many where the orchardist of to-day must see things as they are to-day and forget about conditions as they existed thirty years ago.

The fact that nurseyermen in California do not agree on the values of the different rootstocks for the different fruits is of great interest, and

clearly shows that California should have started

a systematic study

of the rootstock problem long ago. Growers and nurseyermen have always felt such a need, but nothing was done until the past two or three years when the Division of Pomology of the University of California undertook such a study.

One of the questions asked in the questionnaire recently sent out, was—"What about the Sweet Cherry on Mahaleb stock in California?"

Some of the replies were:—

1. "I see no objection to Mahaleb root other than that it is a dwarf and the trees grow smaller."
2. "O.K."
3. "Equally as good as Mazzard on any well drained soil."
4. "If grafted low, Mahaleb is preferable in all soils."
5. "Do not use it."
6. "Not desirable."
7. "Mazzard is best root."
8. "No good."

The above replies were taken from the questionnaires returned by eight large nurseyermen. Four claim the Mahaleb to be the better root for the Sweet Cherry and the other four think it should not be used. Is it any wonder that our fruitgrowers are making their own observations as to the relative values of the different rootstocks? No one is to blame for the existing conditions. We simply lack accurate data.

Another question asked was—

"With reference to Pear blight, what do you think about the French and Japanese rootstocks?"

Some of the replies received read as follows:—

1. "Prefer the French."
2. "We feel that the Pear on Jap. is a little more susceptible owing to the fact that the tree makes a much larger growth."
3. "No noticeable difference."
4. "Use the French in preference to the Jap."
5. "Can see no difference."
6. "Neither has any advantage."
7. "Japanese is less susceptible."
8. "Japanese more resistant."

Here again we see differences of opinion. What the correct answer is we do not know.

No doubt the above replies are based on careful observations in the field, but the question can now be raised as to the absolute certainty regarding the kind of rootstock a certain tree is worked on.

A grower may be under the impres-

sion that his trees are on certain rootstock when in reality they are on some other stock. Numerous cases of this nature have been called to the writer's attention during the past year.

Here again is another neglected phase of the rootstock problem. It was only last year that the Division of Pomology undertook the problem of determining methods of identifying the different rootstocks.

The deeper we go into the subject of rootstocks the less we seem to know.

The following table gives the percentages of the rootstocks used by the nurseyermen of the State for the different fruits during the years 1917 and 1922. The figures for 1922 represent over nine million trees:—

Stock for Almond.	1917.	1922.
	%	%
Almond	56.0	72.0
Peach	44.0	28.0
Stock for Cherry.		
Mazzard	71.0	80.4
Mahaleb	26.0	19.6
Others	3.0	—
Stock for Pear.		
Japanese	63.0	68.0
French	33.0	23.4
Quince	4.0	6.2
Calleryana	—	2.4
Stock for Prune.		
Myrobalan	64.3	63.8
Peach	23.3	25.2
Apricot	1.0	1.4
Almond	11.4	9.6
Stock for Apricot.		
Apricot	57.0	46.8
Peach	27.0	30.7
Myrobalan	13.0	22.5
Almond	3.0	—
Stock for Peach.		
Peach	91.0	98.0
Almond	3.0	.3
Apricot	3.0	1.4
Myrobalan	3.0	.3
Stock for Plum.		
Myrobalan	60.0	57.6
Peach	37.0	29.6
Apricot	—	10.7
Almond	3.0	2.1

The above figures bring out some interesting facts. It will be noted that the Almond root seems to be gaining in favor as a stock for the Almond. While the demand for the Peach root for the Almond was nearly the same as that for the Almond root in 1917, it now appears that the Peach root is losing in favor.

The Mazzard root is in greater demand for the Cherry now than in 1917. This is probably due to the fact that those who advocate the Mazzard root have more influence than those who stand by the Mahaleb.

As was previously mentioned there is very

little definite information as to the relative merits of each root outside of that which has been handed down by tradition. There is no doubt in the writer's mind that there are Cherry orchards in California on the Mahaleb root where the owner be-

lieves them to be on Mazzard and vice versa.

Although the French Pear root was in greater demand than the Japanese root many years ago, it appears to be losing in favor. This can possibly be accounted for by the fact that "the French root is more susceptible to blight due to its persistent sucker-ing."

On the other hand, the Jap root has made a poor record in wet soils where the French does well. The Quince root is evidently in greater demand now than in 1917.

Although no Pears were propagated on the Calleryana root in 1917, 2.4 per cent. of all Pear trees propagated in 1922 were on this root. In all probability this root will be gaining in favour due to its "resistance" to blight.

Very little change appears to have occurred in the demand for the various rootstocks for the Prune.

The Peach and Myrobalan roots seem to be coming toward the front as stocks for the Apricot. The Almond root seems to have been abandoned as a rootstock for the Apricot. Nurserymen and growers have learned through sad experience that it doesn't pay to bud the Apricot on the Almond, on account of the poor union.

Despite the fact that nematodes are causing a great deal of trouble in the San Joaquin Valley to Peach trees on Peach roots nearly all the Peach trees propagated last year were on the Peach root.

Two nurseries reported propagating some Peaches on the Apricot stating that growers were demanding this root in some nematode infested areas. One nursery reported some Peach on Almond and Myrobalan.

However, the last three mentioned stocks have also been practically abandoned as stocks for the Peach as is shown by comparing the figures of 1917 with those of 1922.

Although there appears to have been no demand in 1917 for the Plum on the Apricot root there was a rather large demand for this root during 1922. During the past few years a large amount of data has been collected showing just what Plum varieties can be successfully worked on the Apricot, and it is probably for this reason that some growers are demanding the Apricot for the Plum.

One nursery reported a few Walnuts on the eastern black root. All others reported all Walnuts on the Northern California Black.

—“American Nurseryman.”

PERSONAL.

Mr. T. W. Attwood, President of the New Zealand Fruitgrowers' Federation Ltd., who recently paid a visit to the Old Country to inquire into the matters relating to fruit distribution generally, has again left New Zealand on a visit to Great Britain in the interests of the Federation.

Stocks for Apple Trees.

Experiments in N.S.W. with Seedling Stocks.

In reply to an enquiry relative to the comparative experiences with seedling and blight proof stocks, the N.S.W. Government Fruit Expert, Mr. W. J. Allen, writes as follows:—

"The Department has not got seedling and blight proof stock growing side by side, and consequently is not in a position to say much about them at present.

"There are a few seedling stocks in various parts of the State on which Gravenstein and several other varieties are worked. It is well known that the former twists badly when worked on Northern Spy stock, but when worked on suitable seedling stock, it makes a very strong, large tree, and carries heavy crops of fruit.

"In this State there are a few varieties, such as Jonathan, which, in some soils, do not make very strong growth on Northern Spy, and it is the intention of the Department to test selected seedling stock at Bathurst Experiment Farm side by side with Spy, having the same varieties on both.

"It is thought that the seedling stock experiment will give valuable information as to the question of selected seedling stock replacing blight proof stock.

"The Department does not recommend the use of seedling stock indiscriminately, as it is well known that whilst some are practically blight proof others are very susceptible to woolly aphid.

"The young seedlings are being grown from seed of several of the stronger growing varieties, and from these the strongest and most immune will be selected."

EXPERIENCE IN SOUTH AUSTRALIA.

Views of Mr. Geo. Quinn.

With reference to Blight Proof Stocks and Woolly Aphis, in South Australia the position is as follows (writes Mr. Geo. Quinn, Government Horticultural Instructor).

The only trees now in existence worked on seedling stocks are found in old orchards—those planted up to dates ranging from 25 to 30 years ago. All the rest are on either double worked Spy or Majetin stocks. Occasionally a plantation is found worked on some other proof or resistant stock.

My recollections of the old trees worked on seedlings are that they were very knotted and gnarled on root and branch, and displayed no more aptitude for cropping than do the

modern trees worked on blight proof stocks and planted in the same orchards.

In the planting of those old orchards the early fruitgrowers usually clung to the deep, moist valley lands and the trees were trimmed up and sent skywards, which combined with the richness of the soil induced greater development of top than is now achieved or desired in our modern trees. Hence an acre of such trees in their year for a crop bore great quantities of Apples in spite of Woolly Blight.

I think possibly in most cases where much disparity of growth is noted between trees on seedling stocks as compared with others on blight proof root grafted Apple trees the soil and general surroundings have much to do with the disparity.

By all the canons of fruitgrowing or gardening lore the seedling stock, if untrammelled by pests, should be stronger than where the root system has been artificially induced by a segmentary process of propagation, but is that a fact?

The seedling has a taproot, but unless the plant be raised from seed in situ, and its root system remain unbroken, is there much gain over the root system which lacks a central axis?

When it comes to a question of securing a high general standard of average of constitutional strength, it is doubtful indeed whether the seedling—for every seedling in the nursery bed will vary in this characteristic—has any recorded advantage.

Perhaps the method of raising the Lambert Cypress, popularly used as a hedge plant, will answer this query very effectively to those who are familiar with it when grown under varying circumstances.

The principal drawback to the use of non-blight proof seedling Apple stocks would appear to rest in the difficulty of keeping the young grafted Apple tree sufficiently free from the ravages of the insect to enable it to develop to a normal size consistent with the bearing surface deemed necessary.

I am quite aware this statement will be countered by pointing to many fine trees in existence in many orchards, but their development may—in this State, at any rate—be suspected to be due to the circumstances referred to previously, combined with a probable unrecognised degree of resistance to the blight in those trees which survived to maturity.

To me this query resolves itself into one of "can we afford to ignore the Woolly Aphis factor in propagating our Apple trees?" If any grower of Apples on a commercial scale in this State be asked this question, I am sure his experiences in recent years—even with the roots of his trees immune from this pest—will give a very scornful reply to anyone simple enough to propound it.

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CHAS. WALLACE.



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If I may be allowed to intrude it here, the query that perplexes me is why should this Woolly Aphis have increased to such a marked degree on the tops of our Apple trees, worked on blight-proof stocks during the past ten to fifteen years where formerly they were practically, though not actually, free from its ravages?

This increase is on the portion above ground only—the roots still remain untouched. Perhaps some of your readers can advance some tangible reason. Personally, I hold an opinion, but prefer to refrain at present from expressing it.

A QUEENSLAND OPINION.

To the Editor.

Sir,—I cannot think that the advocates of seedling stocks for Apple trees are aware of the calamity that befell Apple growers in this district during the years 1868 to 1880.

I have very definite ideas in connection with this matter, and from my experience I consider that the whole combined strength of the nursery trade should use its influence, if necessary, to combat any attempt to induce the use of other than proved blight-proof stocks for Apples: not in self interest, but in the interest of their clients, and the community at large.

My experience in connection with American Blight (*Schizoneura Lanigera*, or as we then knew it, *Aphis Lanigera*) dates from the early "70's," and may be of some interest, and seeing that you invite communications on the subject, I am sending some details of same for what they are worth.

When I came to this district in 1872 Apple growing was, and had been for some years, a profitable industry, but the trees of many varieties were more or less affected by the blight, and rapidly getting worse, the trees gradually died out: about 12 years later there was scarcely a dozen trees in the district.

In the mid 70's the pest was a fertile subject for discussion between myself, Mr. E. Way, the first Curator of the Botanic Gardens and a Mr. C. H. Hartmann, who had recently started a nursery on the Main Range.

In the garden then under my care, I noticed a Winter Majetin Apple tree kept entirely free from blight, while a Red Astrachan near by was covered with it, and its roots were a mass of cankerous protuberances. I communicated my observations to my friends, one of whom, Mr. Hartmann, had also noticed the same thing: he also had just introduced the Irish Peach Apple, and claimed for it perfect immunity from blight, a claim which was subsequently justified by a severe test.

I grafted scions of both the W. Majetin and Irish Peach on to the

badly diseased Red Astrachan, where they grew, and during summer I loosely plaited the growth from the scions with the diseased shoots of the R. Astrachan, and at the beginning of winter, when the shoots were separated, both the Majetin and the Irish Peach wood was perfectly free from blemish, though some of the cottony substance was adhering to the bark of each: the growth of both remained clean, and bore fruit the second year, when the Astrachan was blown out by its roots during a storm.

Later on, the Northern Spy Apple was introduced, and was soon boomed in the Southern States as a stock: I put it to a similar test, using a diseased Winter Pearmain to work it on, and it stood the test equally well. I had tried the other two sorts as stocks, and while the W. Majetin proved fairly satisfactory, I found that the trees worked on Irish Peach lacked constitution.

On using the N. Spy I soon realised that it was a great improvement on the other, and on account of its ready rooting, and tendency to make a lot of fibrous roots, I agree with the generally accepted opinion that it is the ideal stock for Apples, and I would not knowingly plant, or even handle for sale, Apple trees worked on other than proved blight-proof stocks. I will go further, and say that realising the importance and rapid development of the Apple growing industry, in the granite belt in Queensland, an Act should be passed making it illegal to plant Apple trees worked on other than blight-proof stocks.

GEO. SEARLE.

Geo. Searle & Sons Ltd.,
Seedsmen, Nurserymen, & Florists,
Toowoomba, Q.

Cherry Growing.

What is the Best Stock?

Views of Mr. W. J. Allen.

In answer to an enquiry, Mr. W. J. Allen, N.S.W. Government Fruit Expert and Irrigationist, states that both Mazzard and Kentish stock are used as stock for Cherry trees in New South Wales, and, it is thought, the former predominates over the latter, probably because nurserymen prefer Mazzard, as it makes a freer growing tree.

In the Uralla district, in the Northern tablelands, on deep volcanic soils, some very large trees can be found on Kentish stock, which are over forty years old.

It is claimed in the Young district that Cherry trees on Kentish stock stand severe droughts better than those on Mazzard.

The gumming of the trees is generally most troublesome in this State while the trees are young and before

they come into regular crop. Scoring of the bark in the spring has been found helpful in overcoming this trouble. Avoid topping back when pruning as far as possible, though it generally has to be practised for the first two or three years.

In the Young district Kentish stock has been found suitable for such varieties as "Florence," "St. Margaret," "Early Purple Guigne," and other varieties that take a long while to come into crop, especially on deep, rich soils.

Mazzard is preferred for "Early Lyons," "Eagle's Seedling," and "Bigarreau Napoleon," as these varieties are liable to overcrop and the fruit run too small on Kentish.

The Kentish will certainly bring most varieties into crop sooner than Mazzard, which is often a distinct advantage, and some varieties, such as "Early Purple Guigne" will never crop satisfactorily on Mazzard.

It is claimed that the Kentish stock reduces the size of the tree, and, except in very poor and shallow soil, this is often rather an advantage than otherwise.

PASSION FRUIT CULTURE.

Fighting Fungus Foes.

Sclerotinia rot, which is due to a parasitic fungus (*Sclerotinia sp.*) frequently attacks the stem of the vine at about the ground level. It manifests itself as a white mould growth on the surface of the stem; the bark becomes rotten, and falls away, exposing the wood fibres.

In between the decayed bark and wood, hard black bodies (*Sclerotia*) are formed. This is one of the means by which the fungus is propagated. The sclerotia give rise to small trumpet-shaped structures, which produce the spores in great numbers. That part of the stem below where it is attacked often shows pronounced swelling, and vines attacked by the disease turn yellow and wilt.

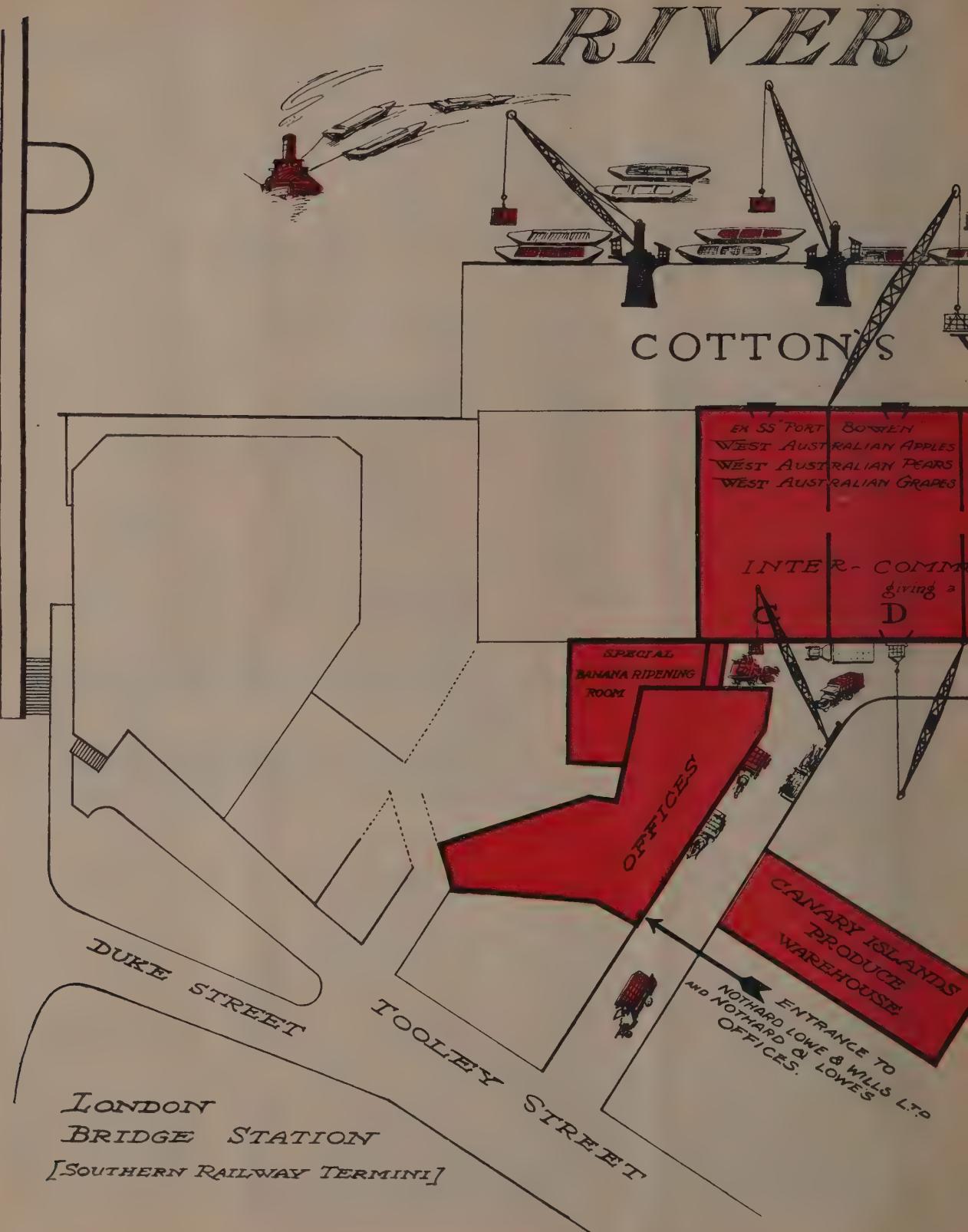
Sclerotia are often to be found in the central cavities of the branches, where they assume the form of the space in which they are confined, i.e., long, narrow, cylindrical bodies. At the point of attack on the stem they are often flat and irregular in shape.

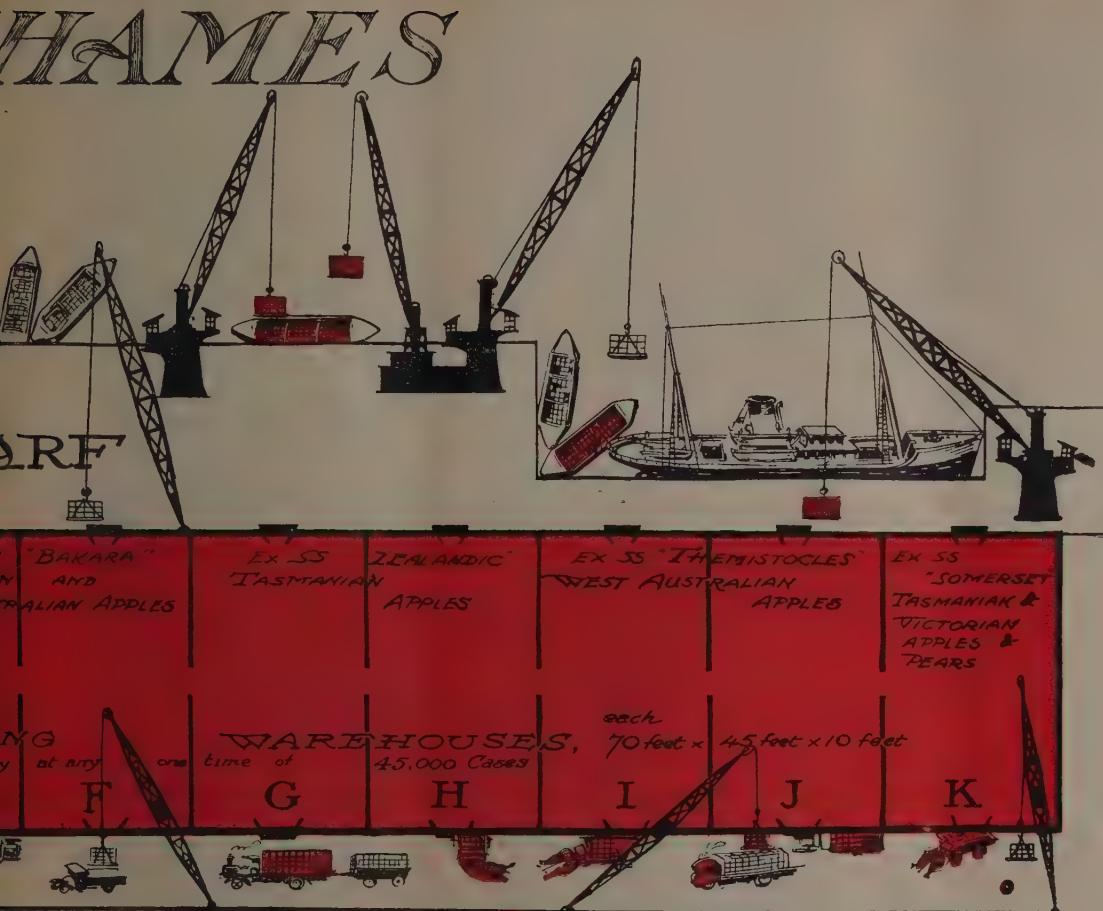
The fungus usually gains entry into the plant through injuries, mostly brought about by the implements used in cultivation. Lack of drainage predisposes the plants to attack.

Diseased plants should be removed and burnt, care being taken in the operation to prevent the black bodies from being scattered about. An application of freshly slaked lime to the soil is recommended, and it is important to avoid injuring the plants in cultivation.

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Mr. L. R. Macgregor, Director of the Council of Agriculture, writes:—

"I am pleased to note the moderate view in regard to the Queensland Fruit Organisation Scheme which appears in January "Fruit World." The analysis of the Act is very good, but on page 13 the account of the conflicting views is not a fair reflex of fruitgrowers' opinion. This part of your article features the opposing element. As a matter of fact the large body of opinion in fruitgrowing districts is behind the Organisation Bill, and it is

only the view of a dissenting minority which has been featured in one of the to the present Government. Your article from that standpoint is still not fair. For every protest that has been made very many more resolutions in favour could be cited.

"I feel that the Queensland Marketing Scheme will be successful, and should my anticipations prove to be the case, it will be an excellent example to other States in Australia of what can be done by organisation."

[Editorial Memo.—So far, the views expressed in these columns are those of our correspondents, many of whom are in favor of the new organisation. We trust, however, that the publication of the views of those who object will not be considered unfair.

Criticism is good. The new Queensland marketing organisation is very young, and has an immense task in front of it. The ideals are sound, namely, to uplift the Queensland fruit industry. The future is entirely dependent on the measure of success which is attained.

The growers and the Committee of Direction have the matter in their own hands, as their power is complete.]

Fruitgrowers Reject Proposed Agreement.

The following letter is just to hand:—

The Editor, "Fruit World."

Sir,—Many of your readers no doubt are watching our latest experiment in the fruit industry, and the doings of the Committee of Fruit Direction will be of interest to many of them. This Committee apparently has unlimited power under the Fruit Marketing Act passed by our legislature last session, though it is doubtful whether they can legally interfere with Queensland fruit consigned to the Southern States, a clause in the Federal Constitution being to the effect that trade and commerce between the States shall be absolutely free. Anyway, whether it is legal or not this Committee is interfering, and very drastically too.

It has been the custom of many of our North Coast Banana growers to sell their fruit straight out for cash to buyers representing chiefly Victorian and South Australian firms, and the order has been issued that this practice must stop, no more sales for cash, everything to be sent on consignment to agents solely appointed by these dictators. It is a nice position for a grower to be in: absolutely prohibited from selling his fruit, and to have no voice as to who should sell it for him. Let your southern fruitgrowers ask how they would like this system to be applied to themselves. I think there would be only one answer—away with it.

Having looked at it from the growers' end, let us examine it from the sellers' standpoint. Many of the southern firms have spent much hard

cash in catering for the Queensland trade, this Committee has cut a lot of them clean out and held a pistol to the head of the others in the shape of an agreement, a regular stand and deliver attitude. Sign this or we will stop your supplies—an agreement which contains a clause—"that each such appointed agent will rebate to the Committee of Direction out of the commission charged to the grower a rebate commission of per cent., which shall be paid to the Committee of Direction at such times as the Committee of Direction may determine." I wonder who will really pay?

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TASMANIAN AGENT
The Port Cygnet Fruitgrowers'
Co-Operative Association
Ltd., Cygnet

The Brisbane agents were asked to enter into a similar agreement, but turned it down flat. A meeting was held in the Fruit Exchange, Turbot-street, attended by every agent except three, who could not come for various reasons, and who sent messages agreeing to any action taken, and the following resolutions were carried:—

1. That this meeting of fruit merchants decline to sign the agreement submitted by the Council of Direction.
2. That the Fruit Merchants' Association appoint a Committee to inquire fully into the whole matter, and report to a meeting to be held at a future date.

3. That all present pledge themselves not to act individually or independently of one another in this matter.

Yours faithfully,
"ROMA TURBOT."
Turbot Street, Brisbane, 24/1/24.

WAGES IN THE FRUIT INDUSTRY.

Arbitration Proceedings in Queensland.

The Australian Workers' Union has filed a plaint in the Queensland Arbitration Court to apply to employers engaged in agricultural pursuits (fruitgrowers, market gardeners, farmers, dairymen, etc.), but not to the sugar industry, which already has its own award.

A Summary is as follows:—

Hours.—44 per week; overtime.—Wages to be at time and a half; Sundays, double pay.

Holidays.—Employees may work on twelve holidays named without extra

Fares.—Employees to be allowed fares to place of employment for first six months (or lesser period employed), "and shall be allowed his return fare, provided he faithfully fulfils his duties for not less than 12 months. Employer to have the right of making his own arrangement for conveyance of employee.

Accommodation.—Employers to provide all employees with accommodation free of charge (in conformity with the "Workers' Accommodation Act of 1915"), and in addition a suitable mattress: also artificial light in kitchen and dining room till 10 p.m.

If away from huts or barracks, employer to provide tents and camping utensils free of charge.

Food.—Food shall be supplied to the employees of sufficient quality, sound, well cooked, and properly served by the cook or his off-sider, and goods as per schedule if reasonably procurable.

Provided that a married man living with his wife on the property, or men living alone may be supplied with food uncooked; no charge to be made by the wife for cooking, nor shall the employer charge the wife any rent for house accommodation.

If mutually arranged, employee may be allowed £1 per week instead of being supplied with food.

Schedule for Scale of Rations.

Bread or flour, meat, vegetables, oatmeal, rice, cornflour, tapioca or sago, macaroni or vermicelli, barley, jam, fruits (Currants or Raisins, Dried Apples, Apricots or Prunes), sugar, syrup or treacle, tea, coffee, cocoa, milk (fresh or condensed), curry, salt (fine), mustard, spices, herbs, pepper; essence, pickles, vinegar, sauce, soap and washing soda (for cleansing cooking utensils), carbonate of soda, cream of tartar, cheese and butter (except in summer), suet.

General.

Employer to provide suitable disinfectants for hut; simple medical and surgical appliances at cost price; deliver letters speedily; supply all tools free.

Only one youth to be employed for every three fully paid employees.

Preference of employment shall be given to financial members of the Australian Workers' Union.

RUTHERGLEN BUG.

Several districts in Victoria, particularly the Goulburn Valley, are troubled with a bad infestation of the Rutherglen Bug, a small flying insect which sucks the sap of the leaves and fruit, reducing the crop of fruit, injuring the trees, and rendering such fruit as is attacked unfit for canning.

Mr. J. M. Ward, Superintendent of Horticulture, and Mr. C. French, Jr., Government Entomologist, recently

visited Shepparton to investigate the problem.

Mr. French recommends spraying with Phenyle Spray, Benzole Emulsion or Nicotine.

Phenyle Spray.

1 quart phenyle.
3 lbs. washing soda.
1 bar yellow soap.
40 gallons water.

The soap is shredded and dissolved in hot water. The other ingredients are added, and the mixture made up to 40 gallons.

Nicotine Spray.—There are several proprietary Nicotine preparations available.

If growers desire to make up their own tobacco sprays, the following formula is recommended:—

(Although this formula is given for making a small quantity, the same proportions would be used.)

Steep 1 lb. tobacco stems in 1 gallon of hot water, and allow it to soak for 24 hours. Boil 1 lb. soap in 1 gallon of water until the soap is dissolved. Strain the tobacco water

Edward Jacobs & Sons

Covent Garden Market
LONDON, England

Solicits Consignments
of Australian Fruit.

Tasmanian Representative:
W. D. Peacock & Co. Ltd
PRINCES WHARF, HOBART

Shipping Number 418.

into the soap water. Stir well, and make up to 5 or 6 gallons.

Smudge Fires.

When a gentle breeze is blowing, make smudge fires at intervals amongst the trees, and sprinkle a little sulphur on them. Should sulphur be used, fires must not be made too near the trees, otherwise foliage will be damaged.

IS IT A STOMACH COUGH?

If your cough is a chest cough, this does not interest you. But if it is due to stomach disorder, and is accompanied by a furred tongue, phlegm in the throat and a general feeling of "goneness," it is time you took a dose of A.M.S. This herbal extract is a wonder-worker, and a positive cure for Indigestion and Liver troubles. A few drops after every meal is keeping thousands in perfect health, and buoyant spirits. A.M.S. costs 3/- the bottle, by Post 3/6, and can be procured from all chemists or country stores, or direct from T. A. Dickson, Chemist, Geelong, Victoria.

payment, but must receive each year (or at termination of service), a holiday on full pay for every day so worked, also annual leave of eight days on full pay. If the employee leaves, or is dismissed before completing a year's service, he must receive a monetary pro rata equivalent proportional to his period of service.

Sickness.—Employee must produce doctor's certificate (or other evidence) if absent from duty; employee entitled to wages during sickness to the extent of one week per annum.

Wages (with keep).—Adults, other than harvest hands, £3 per week; harvest hands, £4/10/- per week.

Youths, other than harvest hands—Under 18 years, £1/10/- per week. Over 18 and under 19, £2/5/- per week.

And thereafter at adult rate.

(Youths, harvest hands)—

Under 18 years, £2 per week.

Over 18 and under 19, £3/2/6 per week.

And thereafter at adult rate.

Orchard Work for February.

Harvesting, Manuring, Pest Control.

(By W. J. Allen and W. le Gay Brereton.)

Harvesting.

Some of the early varieties of Apples are harvested purely as cookers, and these can be picked as soon as they are up to size, provided the demand is good.

When picking for export, especially for early shipments, the grower is necessarily influenced to some extent by the sailing of the boats, though fortunately both Apples and Pears will ripen and develop their full flavor and typical texture after they are picked; in fact, the majority of Pears will not ripen satisfactorily on the trees. (writes Messrs. W. J. Allen and W. le Gay Brereton, N.S.W. Department of Agriculture, in N.S.W. "Agricultural Journal.")

There is, however, a certain stage which both Apples and Pears should reach before they are picked, and there are several indications by which this stage can be judged.

The browning of the pips, for instance, cannot be relied upon by itself, but the condition of the flesh must also be taken into consideration.

The flesh, when cut or bitten, should have lost its woody texture, and show some juiciness. When tasted, there should be an indication of the sweetness and flavour (though, of course, not fully developed) characteristic of the variety when ripe. Colored varieties should hang, if possible, till their color develops sufficiently.

But the indication which has most influence in forming a decision, as to when to pick, is the readiness with which the stalk parts at its union with the spur. Naturally, if one delays picking after this condition prevails, there is a great risk of loss from wind. Ability to judge the condition when to pick is very easy to acquire, and one soon gets familiar with the varieties one is handling. But caution must be exercised in not trying to generalise too much.

For instance, Williams' Pears may be picked very green if the price and market warrant. Packham's Triumph, on the other hand, must be allowed to hang until well matured, or it will not ripen well after picking, and will show a change from the green color of the skin some time before it is fit to pick.

It is not wise in some districts to wait for color in such varieties of Apples as Gravenstein and McIntosh Red, as they fall before developing it. With such varieties, if one wishes to leave them as long as possible to color, the trees should be mulched with straw or dried grass, and the fallen fruit picked up daily.

Delicious must be allowed to hang till well matured on the tree, or its texture will remain woody and unpalatable. This Apple hangs well, and the early specimens can often be allowed to hang till the later ones on the same tree are fit to pick, though with most varieties of Apples and Pears it is necessary to go over the trees two or three times.

Manuring.

In localities where the soil is sufficiently moist, citrus trees can receive their summer dressing of manure this month, but if the soil is very dry it would be better to withhold this

every effort should be made to cart on to the orchard land any humus-supplying matter that is readily available.

A successful grower on a light, sandy soil on the Hawkesbury River, is so convinced of the necessity of maintaining the humus content in the soil that he roughly chaffs all the stalks from his maize crops and ploughs them under among his trees. His action in this matter suggests the possibilities of growing a crop for the purpose, preferably one which will make some independent return, but which will leave a bulky residue that can be applied to the orchard soil.

Of course, such a practice could only be considered under conditions that generally forbid the raising of green manure crops among the trees. As it happens, this is often the case in our inland districts where land values are not so high, and the fruit-grower generally has more spare land than in the more closely settled districts on the coast and tablelands.

Pests.

The present month is generally about the time that red scale of citrus trees is breeding, and it should be dealt with before the protective covering of the young scale develops sufficiently to render the pest immune to treatment. Resin soda wash is one of the most effective and safest sprays to use.

If white wax is the only scale present, then washing soda solution (1½ lbs. to 4 gallons of water) is sufficient. Generally, white wax commences to hatch out earlier than the red scale, and must be dealt with before the insects of the earliest hatching are as big as wax match heads.

Fumigation still proves to be the more efficient method of dealing with citrus scale. One decided advantage that it has over spraying is that it is effective on young scale at a later stage than are sprays, which means that fumigation can be delayed until later than spraying, with a better chance of all the eggs of later scales having been hatched. It is risky either to fumigate or to spray, if the trees are suffering from lack of moisture.

The Apple and Pear grower is sometimes tempted during the busy part of the picking season to neglect the regular collecting and destroying of moth-infected fruit. Such neglect only means more trouble and loss later—if not this season then the next—and it must be emphasised that vigorous precautions must be kept up throughout the season if the pest is to be kept satisfactorily under control.

Where returned cases are in use, care should be taken that infection is not brought in from outside sources. These remarks, both as to the regular collection and destruction of infected fruit, and the care of returned cases, apply just as forcibly to the control of fruit fly.

The North and Midland Counties of England

Are directly served by

THE PORT OF HULL

Every modern facility for prompt handling of fruit.

Docks and quays provide for quick discharge of cargoes.

Sales held daily during the season.

Express train service to all parts of England.

Australian Apples Sold at Hull in previous seasons brought the highest prices.

For further particulars apply to

E. BECHERVAISE

Representative in Australia

51 Moorabool St., Geelong
Victoria

dressing. While the soil is dry, it is a good opportunity to cart on any soil for re-soiling or stable manure or other matter to supply humus.

Re-working.

If the sap is running freely, it is a good time to bud any trees that have been previously cut down in preparation for this work. When securing buds be sure to select them from trees that have proved to be constant crop-ers of a good type of their variety.

Green Manuring.

Green manuring is practised primarily to supply humus to the soil, and, as under many conditions it can only be carried out intermittently,

Tasmania

EXPORT OF "BLACK SPOT" APPLES : SCIENTIFIC COLD STORAGE INVESTIGATION : LIME-SULPHUR SPRAYING, ITEMS OF INTEREST

(By Our Correspondent)

THIS SEASON HAS PROVED disastrous to the Apple and Pear grower. The full extent of the adverse climatic conditions are now visible in the orchards. With few exceptions, the crops are very light, and in many cases a complete failure. The small quantities of fruit that is left to growers is much affected with Black Spot.

It is estimated that the production in Apples and Pears will be only 33 per cent. of a normal crop, whilst the major portion of this will be much blemished.

The new Commonwealth fruit standards could not have come in at a worse time for Tasmanian growers, as under these it will be almost impossible to ship fruit to the overseas markets.

Standardisation is no doubt a valuable aid to the marketing of produce, and it may be quite competent to designate grades which will be acceptable and workable in all Apple growing States of the Commonwealth under normal conditions.

However, it is questionable whether these shall be fixed to the extent that they will deprive the grower of a means of marketing his crop in a bad season, especially when conditions have been brought about by factors over which he has no control.

There is no doubt that a good market will exist for Apples in England this coming season. Fruits that are slightly affected with Black Spot, whilst unsightly, are not materially injured in flavour, and can be utilised for culinary purposes without detriment. Some arrangement should be made by the Customs authorities to permit the export of this fruit, especially as it is the whole means of living available to the producer.

Fruit Carriage Investigation.—The report from the Cambridge Scientists who were engaged to make an investigation into the carriage of fruit in insulated chambers to overseas markets is to hand.

Whilst this is of a lengthy nature, it does very little more than bear out the contentions of practical growers that "brown heart" was principally caused by the neglect to provide efficient air circulation in certain cargoes during the 1922 season.

It is understood that the investigation is to be continued over the 1924 shipments in order to complete and check data. Advices are to hand that the Cambridge University have approved of the installation of Mr. F. Wakefield's carbon di-oxide testing apparatus in a number of vessels, and

it will be used in conjunction with the Cambridge experiments this season.

Walnut Culture.—At the request of a number of interested growers the Fruit Expert (Mr. P. H. Thomas) has obtained a quantity of nuts of the California Black Walnut, which have been cross-fertilised with the English variety.

According to American reports, varieties that are grafted upon seedlings of the first generation of this cross are more vigorous in growth, earlier bearing, and not so susceptible to disease.

Arrangements are being made for the propagation of a number of trees on this stock, which will be tried out in suitable locations. It will be interesting to compare results with the trees already established that are generally upon assorted stocks or are ordinary seedlings.

Canned Fruits.—Arrangements have been made by the different factories to process the Apricot and Pear crop under the Commonwealth Bounty Scheme. The crop of Apricots is of good quality and size, and the yield is generally satisfactory.

Pears are very light this season, and should be in short supply.

The berry fruits are now almost harvested, and crops are generally satisfactory. These have either been bought outright by the factories, or put up under an advance scheme of 3d. per lb. on the fresh fruit. The latter has been generally agreed upon by the Co-operative Associations.

Lime-Sulphur Spraying.—A number of fruitgrowers in different districts report damage to foliage and fruit from the use of Lime-Sulphur at very weak strengths when spraying for Black Spot. In nearly every case a heavy fall of leaves and fruit has occurred about several days after the application was made.

Cases are cited in which the spray was applied as weak as 1-100 (32 deg. Beaume test), which have produced these results.

The matter is being investigated by officers of the Department of Agriculture, at the same time it has been known that under certain climatic conditions following an application, viz., continuous damp wet weather, there is always a danger of what is termed "sulphur shock." Certain of the tender varieties, such as Jon, C.O.P., and Dunn's, are more susceptible than the more hardy kinds.

Quarantine Regulations.—Representations have been made by various fruit retailers requesting a modifica-

tion of the quarantine regulations in regard to citrus and tropical fruits imported into the State from districts infected with fruit fly. Fruitgrowers are very much against this being put into effect, and urge that no risks of introduction of this pest be taken.

T. STOTT & SONS

Fruit Merchants

Established 1882

A Trial Consignment solicited from Growers in all States.

Prompt Settlement.

11 WESTERN MARKET, Melbourne

TASMANIA

We are the Leading Australian Firm of FRESH FRUIT EXPORTERS, JAM MANUFACTURERS (IXL Brand), FRUIT CANNERS, HOP FACTORS (owning the largest cool stores for this purpose in the Commonwealth).

Supplies of Corrugated Straw-board, Genuine Sulphite Paper, Nails and best Packing Materials available at all times.

Sole Distributing Agents for the Southern Tasmanian Associated Manufacturers of Evaporated (dried) Apples.

Agents for—
Federal Steam Navigation Co. Ltd.,
Scottish Shire Line of Steamers,
Osaka Shosen Kaisha, London
Assurance Corporation.

Correspondence Invited.

**H. JONES & CO. LTD.,
HOBART**

Fruit Shipments

LONDON

Liverpool and the Continent

W. D. PEACOCK & CO.

24 Martin Lane, Cannon St.
LONDON, E.C., 4
AND HOBART, TASMANIA

Solicit Consignments

The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

The view which is constantly expressed that the fruit fly will not develop under Tasmanian climatic conditions is a very weak prop to lean on. In the interests of the industry it is advisable that vigorous measures be

taken to avoid risks of introduction.

British Empire Exhibition.—Every effort has been taken to ensure that Tasmanian fruits and fruit products secure prominent representation at the coming exhibition.

A new pattern "Lomas Excelsior" Grader, which may be operated by "power" or "hand," has been contributed for operation in the fruit diorama. The various manufacturing firms have prepared special samples of bottled dried and preserved fruits, which will be used for the trophy and manufacturing sections.

Practically every district will be represented in the fresh fruit section, arrangements having been made for special consignments to go forward fortnightly throughout the export season.

Victoria.

VICTORIAN FRUITGROWERS' CENTRAL ASSOCIATION.

THE monthly meeting of the Executive of the above Association was held on January 22nd, 1924. The President (Mr. V. R. McNab (Ardmona) occupied the chair. Mr. J. M. Ward, the newly-appointed Superintendent of Horticulture, attended, and was welcomed by the Chairman. In response to an appeal for a fruit kiosk in connection with the Queen Victoria Hospital Appeal on March 21st and 22nd, it was decided to advise that growers were willing to supply the fruit but could not undertake the selling or organisation of same. It was also agreed to circularise district associations, asking for donations of fruit.

J. Cronin Memorial.—Decided that subscriptions be invited from growers towards a testimonial to commemorate the late Mr. Cronin's great work.

Empire Exhibition.—Mr. W. J. Foster reported that all States except Queensland had agreed to supply fruit for the Empire Exhibition. Some were sending experimental shipments of Peaches: he personally was collecting 24 cases. He had doubts as to whether they would arrive in good condition.

Various districts wrote agreeing to complete their quotas, and it was decided to send the fruit to the Government Cool Store, Victoria Dock, for shipment as required. Mr. A. W. Palfreyman, of the Australasian Jam Company Pty. Ltd., had agreed to make up the quota of manufactured fruit to complete the Committee's undertakings. All arrangements with regard to citrus, dried and fresh fruits had been completed.

The official opening of the Exhibition takes place at London on April 27th.

Packing Instruction.—It was decided, on the motion of Mr. Jas. H. Moody (Pakenham) and the President, to request the Department of Agriculture to provide more facilities for instruction in packing. The

President stated that the growers experienced great difficulty in obtaining packers each year. The instruction of new packers every season was necessary. He congratulated metropolitan growers on the excellent packing of the fruit sold in the Victoria Market.

Export of Black Spot Fruit.—Mr. R. Mair, Tyabb, moved that a protest be entered against the recommendation that fruit affected with Black Spot be exported to the United Kingdom.

Mr. J. H. Lang (Harcourt) formally seconded the motion, in order that he might state the case for Tasmania. He said that when the regulations were being drafted, Tasmania earnestly sought for a fourth grade, which was not allowed. Nevertheless, it was understood that in the event of an abnormal season, consideration would be given to the addition of a fourth grade. This year, Tasmania had only 33 per cent. of a normal crop, and the greater percentage was affected with Black Spot, due to the persistent rains which prevented growers from spraying at the right time.

Mr. F. W. Vear stated that he had been prepared to oppose the proposed export of inferior fruit, but after hearing the story of Tasmania's plight, and the statement that unless the export were permitted, many growers would go out of business, he had agreed with the recommendation.

Mr. J. W. Bailey (Narre Warren) who had also attended the meeting of the National Fruit Advisory Council, stated that although he had been a consistent advocate of grading regulations, and the necessity for shipping a good quality fruit overseas, he had agreed with the request from Tasmania on receiving the assurance that the quantity would not exceed 450,000 cases of fruit which was not deformed, with unbroken skins, and which was only marked with Black Spot, but that with regard to all other shipments, the grading regulations would be complied with. Messrs. W. J. Allen (Government Fruit Expert, New South Wales) and G. Quinn (Government Horticultural Instructor, South Australia) were also present, and although they did not vote, they consented to the recommendation. Mr. Bailey considered that it was one of the worst seasons for Tasmania, and it was only reasonable to allow the fruit to be exported, as the cases would be marked to indicate the contents. He took full responsibility for his action, and made his statement to indicate that he was not inconsistent in his advocacy of grading regulations.

Mr. H. H. Hatfield (Box Hill) suggested that the cases should be branded "Tasmania."

Mr. Moody (Pakenham) said no action need be taken, as if Tasmania liked to risk sending the fruit, it was their own affair.

Mr. Lang further stated that Sir Henry Jones had offered to pay 7/- per case on wharf, Hobart, if the fruit were allowed to go.

On hearing the foregoing views expressed, Mr. Mair withdrew his motion.

Fruit Pool.—It was decided to place on record an appreciation of the valuable services of Mr. W. J. Foster in connection with the Fruit Pools.

Superintendent of Horticulture.—Mr. J. M. Ward, the new Superintendent of Horticulture, stated that he desired to visit the various fruit-growing districts in order to meet the growers and hear their views with regard to the proposed orchard tax and the fixing of grades and standards for Victoria. He stated that much better organisation was needed than existed at the present time. Reforms should be brought about by educational means rather than by legislation.

Harcourt.

The Apple crop is looking well. Very little Black Spot or Codlin showing; though varying in various orchards, the quantity will be about the same as last year.

Buyers from other districts have been round, and several lots have been sold at satisfactory prices.

Not much has yet been booked for the English markets; after the poor prices of last year growers generally are inclined to reserve supplies for the local and interstate markets.

A general meeting of shareholders of the Cool Store was held recently, when it was decided to instal a second power unit in the store. The present steam engine has been giving every satisfaction, but it was thought that an undue risk was being taken in relying on only one power plant.

Since the opening of the store in 1918 the price of firewood has advanced 25 per cent., and there appears no likelihood of a reduction in the near future. The directors recommended that a Ruston-Hornsby crude oil engine be installed. On the guaranteed fuel consumption, this would effect a saving of about £350 in our fuel costs. Some of the shareholders are paying the balance due on portion of their present shares, to enable the new engine to be purchased.

Ringwood.

The prevailing weather conditions being good, some varieties of Apples are cropping well. Of these Jonathan, Delicious, Yates, Statesman are particularly good. Romes and Five Crowns are utter failures in this district.

It is reported that a Victorian grower recently received a cheque for over £350 on a truck of Yates' Apples sent to Sydney, the price being 31/- per case.

The Export of Fruit.

Shipment of 450,000 Cases of Black Spot Apples Permitted.

Opposition Overruled.

During January, a powerful deputation from Tasmania waited on the Minister for Trade and Customs, requesting that in addition to the "plain" grade (allowing 30 per cent. Black Spot), Tasmania be permitted to ship 450,000 cases of Apples which would be practically 100 per cent. Black Spot, the skin to be unbroken, and the Apples not malformed.

A meeting of the Advisory Fruit Council was hurriedly called, and the other States were consulted by telegram: no representatives of the press were admitted. It is understood that the Council, realising the serious position of the Tasmanian industry this season, agreed to recommend to the Minister that permission be granted for the export of Black Spot fruit to be allowed.

Subsequently Mr. Hudson, Controller-General of Customs, stated when the question was dealt with by the Fruit Council, the Victorian representative, as well as those of other States, agreed to the export of Apples with Black Spot, provided the fruit was of uniform size, was not

misshapen, and that the skin was unbroken. Altogether permission was given for 450,000 cases to be shipped. The conditions were that the cases should be largely marked as blemished, so that there would be no danger of the fruit going on the London market as representative graded fruit. Before the matter was finally decided the trade in London was communicated with, and the opinion was expressed from London that the placing of that fruit upon that market would not be in any way detrimental to the better classes of fruit shipped from Australia, nor would the price of good fruit be affected.

On the matter of sympathy, there can be no question, but that fruit-growers throughout Australia have the goodwill of their Tasmanian fellow-orchardists at heart.

The attitude of the fruitgrowers present at the meeting can be well understood. One grower has stated that he would sooner meet Tasmanian competition in England than in Australia.

There is nothing new in the desire of Australian fruitgrowers to send a portion of their inferior fruit to the Old Country, and for this reason—that there is a market for such fruit at payable prices.

There is the East End trade as well as the West End trade in London, thus, Australian fruit which is not of

the first quality is nevertheless welcome by many working people who cannot afford to pay the higher prices. Furthermore, there is always the restaurant and pie trade needing Apples for culinary purposes.

(Continued on Page 96)

SOMERVILLE SHOW

Adjoining Railway Station

Wednesday, March 12th. 1924

Victoria's Greatest Local Fruit Show

Horse Events: High Jump: Poultry Exhibits: Merry-go-round, etc.

Excellent Band Engaged

Special Train Leaves Melbourne (No. 10 Platform) at 9.35 a.m.

Harry G. Overton,
Sec.

One Down — Now for the Pair!

ATTER the first shot a pair goes flashing by. Quick! Re-load. The first duck is caught on the sights. No time to judge a lead if you're to get both. Pull—Bang! One! Now a little lead on the other—not too much if they are the Black Shells. Black Shells are lightning fast—Bang! Both!

It is on the primer that speed depends. Test Black Shell primer this way: Empty out wads, shot and powder, and with primer alone shoot a coin off your gun muzzle straight in the air. Try it with any other shell. Then you'll understand why Black Shells shoot fast.

U. S. The BLACK SHELLS
Loaded with Dupont Powder

Gollin & Co. Pty. Ltd.
Melbourne Sydney Adelaide
and Wellington

Sole Australian Agents for United States Cartridge Co.



Wholesale Distributors :

VICTORIA : J. MUES, Post Office Place, Melbourne.

NEW SOUTH WALES : JOHN KEEP & SONS, Sydney.

SOUTH AUSTRALIA : GOLLIN & CO. Pty. Ltd., Adelaide.

QUEENSLAND : T. McWILLIAM & CO., Brisbane.

SOUTH TASMANIA : JOHN WHITE, Hobart.

NORTH TASMANIA : J. R. GREEN Pty. Lt., Launceston.

These matters have been repeatedly threshed out at Conferences, and have been fully expressed to the Customs authorities before the drafting of the regulations.

But the attitude of the Customs Department is inexplicable. Either the regulations are good or they are bad. There can be no middle course. Either it is desirable to send Black Spot fruit to London, or it is not.

The whole plea for the imposition of the regulations was that the good name of Australia should be maintained on the markets of the world.

Even after the growers had agreed to the 30 per cent. of blemish in the plain grade, the Department, in gazetting the regulations, cut that down severely, and the provision was only restored after considerable difficulty.

Now that there is much Black Spot fruit about, the officials are willing to agree that the regulations are valueless.

This season it is Tasmania making the request for withholding the regulations, next year it may be Victoria, and the following year, South Australia, and so on. Who knows?

So after all the flourish of trumpets and the threats of fining the growers £50 for submitting fruit for export in excess of 30 per cent. blemish, the Customs Department is prepared to consider wiping out the regulations.

The Department shows up in a sorry light over this controversy, and probably the result will be that we shall revert to the Commerce Act, the effective clause under that Act with regard to the fruit industry being that the description on the package must be a true indication of the contents.

The larger aspect of the matter, however, must not be overlooked, and it remains to be seen whether in the long run it is advisable to ship obviously inferior fruit from Australia.

The opening of the British Empire Exhibition is concurrent with the arrival of the first of the Australian Apples.

New factors are continually taking shape. South Africa will shortly be sending substantial quantities of Apples to England in competition with Australian fruit. Already we have the overlapping of the American and Canadian season; and we also know that if the first of the Australian fruit opens up badly the market suffers, as the trade lose confidence, and it takes weeks for prices to recover.

Again, New Zealand is adopting high standards for the export trade in fruit.

Many urgent protests have been lodged from representative growers in Victoria, South Australia, and

Western Australia, and according to recent reports many Tasmanian growers are opposed to the shipment of the spotted fruit.

1924 FRUIT EXPORT SEASON.

Preparations are now in full swing for the handling and despatch of the fruit for export from Australia.

The quantity is considerably less than that sent last season.

Summarised, the approximate quantities from the several exporting

States are as follow:

	Bushels.
Tasmania	900,000
Western Australia	250,000
Victoria	150,000
South Australia	60,000

Total 1,360,000

The programme of steamers has been drawn up, and we give hereunder the latest details available as to boats in commission and the sailing dates. It is possible that this programme will be altered, details of which will be available from the fruit-growers' agents or the shipping companies:

PROBABLE FRUIT SAILINGS—1924:

From Hobart:

Steamer.	Line.	Sailing.	Destination.
Osterley	Orient	16th February	London
Esperance Bay	Commonwealth	16th "	London & Hull
Anchises	Holt's	19th "	Liverpool
Mooltan	P. & O. Mail	1st March	London
Baradine	P. & O. Branch	2nd "	London
Euripides	Aberdeen	9th "	Hull & London
Runic	White Star	11th "	Liverpool
Ormuz	Orient	15th "	London
Moreton Bay	Commonwealth	15th "	London & Hull
Ulysses	Holt's	18th "	Liverpool
Argyllshire,	Shire	25th "	London & L'pool.
Maloja	P. & O. Mail	28th "	London
Bendigo	P. & O. Branch	2nd April	London
Ceramic	White Star	5th "	Liverpool
Sophocles	Aberdeen	6th "	Hull & London
Zealandic	White Star	12th "	Liverpool
Orsova	Orient	12th "	London
Jervis Bay	Commonwealth	12th "	London & Hull
Persic	White Star	19th "	Liverpool
Barrabool	P. & O. Branch	20th "	London
Aeneas	Holt's	22nd "	Liverpool
Mongolia	P. & O. Mail	26th "	London
Largs Bay	Commonwealth	3rd May	Hull & London
Beltana	P. & O. Branch	13th "	London

PLUS: 2 "Shires," probably 4 "Ports" and 3 "Federals."

Tamar Shipments.

The programme of shipments from the Tamar is not yet definite, but the probable loadings are "Boorara," February 24th; "Ayrshire," "Talaman," "Port Brisbane," "Bakara," in March; "Port Napier," "Orestes," "Bardic," "Berwickshire," in April.

The quantity available for shipment is 120,000 cases. Black Spot is prevalent.

From Melbourne:

Steamer.	Line.	Sailing.	Destination.
Demosthenes	Aberdeen	14th February	Hull & London
Osterley	Orient	19th "	London
Esperance Bay	Commonwealth	20th "	London & Hull
Anchises	Holt's	23rd "	Liverpool
Mooltan	P. & O. Mail	4th March	London
Baradine	P. & O. Branch	6th "	London
Ormuz	Orient	18th "	London
Moreton Bay	Commonwealth	19th "	London & Hull
Ulysses	Holt's	22nd "	Liverpool
Maloja	P. & O. Mail	1st April	London
Bendigo	P. & O. Branch	4th "	London
Orsova	Orient	13th "	London
Jervis Bay	Commonwealth	16th "	London & Hull
Barrabool	P. & O. Branch	24th "	London
Aeneas	Holt's	26th "	Liverpool

PLUS: 1 "Shire," 2 "Federals," 2 "Ports."



SULPHATE OF AMMONIA ASSOCIATES "QUALITY" WITH "QUANTITY."

favored several small dressings in preference to one large dressing.

Early Spring is a long way off, but good advice is seasonable at any time.

The Autumn application of fertilisers will soon be interesting Citrus growers, who are reminded that SULPHATE OF AMMONIA is still the cheapest and best source of nitrogen in Australia.

Write for Sulphate of Ammonia literature to:—

THE AUSTRALIAN SULPHATE OF AMMONIA PROPAGANDA COMMITTEE,

360 Collins Street, Melbourne, Vic.

N.S.W. and Queensland: The Australian Gas-Light Co., Haymarket, Sydney: The Broken Hill Prop. Co. Ltd., 28 O'Connell St., Sydney; The North Shore Gas Co. Ltd., 193 Alfred St., North Sydney.

Victoria and Tasmania: The Metropolitan Gas Co., 196 Flinders St., Melbourne; The Broken Hill Prop. Co. Ltd., 320 Collins St., Melbourne.

South Australia and Western Australia: South Australian Gas Co., Waymouth St., Adelaide.

AT a recent Conference of the River Murray branches of the Agricultural Bureau of Sth. Australia, Professor Perkins was asked by the Renmark branch:—

“What is the right time to apply SULPHATE OF AMMONIA to the soil?”

The Professor replied that under ordinary conditions applications should be made in EARLY SPRING when the trees or vines were about to shoot. He

Parasite for Woolly Aphis.

Tests with Aphelinus Mali in Queensland.

The Queensland Department of Agriculture is conducting tests for the eradication or control of Woolly Aphis by means of the parasite (Aphelinus Mali), these beneficial parasites being supplied by Dr. R. J. Tillyard, M.A., of the Cawthron Institute, New Zealand.

Reports relating to the experiments conducted in New Zealand on this

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One or One Million
Supplied

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Allwood Nurseries
Hurstbridge, Vic.

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LONDON

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Fruits.

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Apples, Pears, &c.

Best market prices and prompt
account sales returned.
Correspondence invited.
Representative in Victoria
THE

International Fruit & Mercantile Co.,
410 Flinders Lane, Melbourne

MURDOCH BROS., Hobart

subject have previously appeared in
the "Fruit World."

In Queensland the parasites were hatched on trees affected with Woolly Aphis in the following orchards:— Mr. A. H. Paget's, The Summit, Mr. H. Lee's, Applethorpe, and Mr. T. J. Ballenger's, Stanthorpe. The Queensland Agricultural Journal states that the total hatchings of the parasites at 1st October numbered 107. Details are given regarding the care exercised to breed the insects, recognising the economic importance of having an effective parasite for the Woolly Aphis.

Another experiment has been made to test if it be practicable to induce Aphelinus Mali to attack the Black Aphis of the Peach. Thus a branch of the infested Peach, with individuals of the Aphis was netted in with gauze and six Aphelinus liberated among them.

Dr. Tillyard has stated that Aphelinus will attack any of the dark colored aphides, and in respect to the Black Aphis it may therefore be the case.

Established in Queensland, an effort will be made to introduce the Aphelinus Mali to other parts of the State, as it may prove a valuable help in controlling the Orange Aphis, and also the Aphis of the Bananas, both of which are dark-colored insects.

WOOLLY APHIS ON APPLE TREES.

Experiments with Crude Salt.

In response to a request from the Blackwood branch of the South Australian Agricultural Bureau, it has been decided to carry out experiments to ascertain whether crude salt dug into the soil around trees would eradicate woolly aphis on Apple trees.

The Horticultural Instructor, Mr. Geo. Quinn, stated that if suitable trees affected with woolly aphis could be located in the Blackwood Experimental Orchard he proposed to try the salt dressing during the 1924 season.

A SUCCESSFUL ATTACK ON CUTWORMS.

Throughout the district of Gosford (N.S.W.) cutworms were very bad about the middle of October. Considerable damage was done to plants, particularly Tomatoes, many growers having to make several plantings before obtaining a good stand.

Throughout this nursery and vineyard they were also very numerous (writes Mr. H. G. White, Superintendent of the Narara Viticultural Nursery, in N.S.W. "Agricultural Journal"), and at one time we were finding fifty and more cutworms round each vine. This was in ground that had not been cultivated until late in the season. Where the land had been cultivated and kept free from weeds and rubbish, it was also fairly free of cutworms. The block of vines where the cutworms were so numerous was taken in hand immediately, and sprayed with arsenate of lead.

The following evening a poison bait, made of 1 lb. Paris green, 24 lb. bran, and 9 quarts of water, in which 9 oz. of salt had been previously dissolved, was laid.

Another section was treated with the poison bait only. Not many dead worms were found the following

morning, but on the second day fully 80 per cent. of the cutworms round each vine were dead.

The vines sprayed with the arsenate of lead showed no better results than those that received the poison bait only, so the spraying was not repeated. On the third evening, a fresh supply of poison bait was laid. The following morning, the remaining cutworms appeared listless, and towards evening, all were apparently dead. Nine days after application the bed was apparently free from cutworms.

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F. W. J. MOORE,
Managing Director.

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"THE FRUIT WORLD"
APPRECIATED.

A Subscriber for 25 Years.

Mr. H. Benjafeld, fruitgrower, of Gwandalan, Tasman's Peninsula, Tasmania, sends us a letter which we much appreciate. He states:—

"I have been taking the "Fruit World" for the last twenty-five years, and a first-rate paper it is. Wishing you every success."

The Editor would be pleased to hear from other readers who have been receiving the "Fruit World" for a quarter of a century.

THE COASTAL FARMERS' CO-OPERATIVE SOCIETY LIMITED.

Fruit Report.

It is many years since fruit was so scarce as it has been since the opening of the New Year (states a report issued on January 19 by the Coastal Farmers' Society). The chief contributing factors are:—(1) Dry weather in many producing centres. (2) Reaction after last year's heavy crops. (3) Elimination by many growers of varieties of summer fruits which a few years ago were unprofitable.

The effect of shortage in supplies is manifest in a buoyant market, and improved prices, summary of position regarding various fruits being as follows:—

than usual. These important factors are helping their sale.

Citrus.—Reports indicate next season's crop will be light. Practically the only supplies on the market are Navel and Lemons from America and Italy. The former have been selling at 22/-, and the latter at from 21/- to 27/-.

Grapes.—Rain is badly needed for the coastal crops, which are maturing, and if some does not fall almost immediately, berries will be small. A fine crop, both as regards quality and quantity is expected on the Murrumbidgee Irrigation Area.

Tomatoes.—Ruling rates are high, but householders can expect relief later, for owing to failure of Apple crop in Western Districts, a number



Ford Car and Tractor Service:—Photograph taken at a Convention of Victorian Ford dealers, when at the invitation of the General Manager, (Mr. G. V. Cornwell,) two envoys from Canada gave addresses.

Apples.—Crops extremely light in N.S.W. and Victoria, and much below the average in Tasmania. Early local supplies arriving on the market are selling at from 18/- to 22/- for best sizes.

Pears.—Victorian W.B.C. will be available within a week. Crop is good, but owing to scarcity of Apples, good prices are assured if supplies are correctly apportioned between Canneries and market.

Peaches.—Coastal crop is light, and as growers on the Murrumbidgee Irrigation Area have worked over large areas of Elbertas, and Leeton factory is canning 500 tons. Heavy supplies that reached the market a few years back cannot be expected this season.

Plums.—From many districts are larger and of better average quality

of orchardists have planted large areas.

Export.—While Tasmania on a somewhat restricted basis will continue the export of Apples as a matter of policy, and in anticipation of remunerative values ruling on account of the Empire Exhibition, exports from Victoria will be considerably reduced, and New South Wales crop is so light, and local price prospects so good that few if any Apples will be exported from this State. On the other hand, the attention of growers is favorably directed to the possibility of developing a profitable export business in Pears; the bookings already made indicate a big increase in the quantity that will go forward to England this year.

Sydney, 19th January, 1924.

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Latham Dehydrators

The Widest Fruit Drying Experience in the world is behind these plants. The best possible recommendation is the extent of one's patronage. My plants attract by far the largest drying business in the Southern Hemisphere.

Some Installations

Purchaser	Principal Fruits
Merbein Dehydration Trust, Mildura	Sultanas
Tasmanian Dehydration Pty. Ltd. Bridgewater	Apricots Prunes Apples
Charles Martin, Yackandandah	Prunes
Swallow & Ariell Ltd. Port Melbourne.	Carrots Turnips Cabbages, etc.

Lemon Processing Plants.

Dried Fruit Graders

Dried Fruit Boxing Presses

Apple Slicing Machines

Beltng Pulleys, Shafting, Bearings, Engines and Boilers, Cranes and Hoists, Piping, Trucks, Conveyors, Thermometers, Fruit Trays etc., etc.

D. J. LATHAM
157 Queen Street,
MELBOURNE,
AUSTRALIA.



"The Heinousness of Bustle."

THE AVERAGE WOMAN is likely to look askance at such a title! Surely to bustle round making things hum is a woman's own particular duty, and the more appearance she has of flying round, using up all her energy, so much the better.

As an excuse for feeling worn out in the evening, she offers to hubby the fact that she did not stop rushing about from daylight to dark, and she feels particularly virtuous to be able to assert it.

I wonder does she stop for one moment to consider the effect of years of bustle on her health—her nervous system, her heart, her arteries and veins? So very much ill-health in middle life is due to the fact that women have not realised in their early years the heinousness of bustle.

So many of us are brought up with the idea ingrained into our very souls

HOME MAKING and UPKEEP

(By "Nymphae.")

that leisurely ways indicate laziness, and truly that is not so.

The serene, cool-headed woman will, with a little concentration of mind on what she is doing, accomplish more, in less time and do it better, than her bustling sister who expends energy in needless little journeys about the field of her operations, which a little concentration would obviate.

The bustling woman loses an immense amount of vitality and power from a lack of composure in the doing.

To suggest a rest at midday to such a woman would cause her to retort that she has no time to waste if others have, and besides she has children to look after, so that a rest midday would be out of the question.

Has she ever thought that even big children absolutely require a sleep in the daytime if they are to grow to the limit of their ability?



A little story on the need of backbones, brains, etc., to have a rest will nearly always induce their small possessor to succumb to the blandishments of the sandman even at midday. Certainly the assistance of a darkened room will help considerably.

So much for the bustler herself. But has she thought of the effect of her ways on the members of her household?

A bustling, cumbered woman is a deterrent of restfulness in the house, no matter how kind her intentions may be. She is the Martha in the Biblical story. It was Mary who gave the sense of quietude to the home that Christ sought. Such a hurry of activity as Martha showed betrayed a lack of thought rather than a thoughtful preparation; it involved less sympathy in one's helpfulness, and more self-will than is quite compatible with real kindness.

Don't WONDER what your crop will be!
MAKE SURE by using

"HARBAS"

THE SELF EMULSIFYING RED OIL.

Many Oils LOOK like
"HARBAS" —
But DON'T ACT like it

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Use also

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The Best Fungicide on the Market.

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Law, Sonner Pty. Ltd., Block Place, Melbourne.
F. R. Mellor, 440 Elizabeth St., Melbourne.
Nyah Fruitgrowers' Co-op. Ltd., Nyah West.
Railway Packing Co. Pty. Ltd., Irymple.
Tresco Fruitgrowers' Co-operative Assoc. Ltd., Tresco.
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A RELIABLE SPRAYER

Here is a Plant that Practical Orchardists Value:

PUMP—Double-Acting, High Pressure, Single or Duplex as required, working up to 300 lbs. per sq. inch.
ENGINE—1½ H.P. Fairbanks-Morse, type "Z," operating on kerosene.
VAT—Approximately 80-gall. capacity; strongly made, easily cleaned.
HOSE—Two 30-ft. lengths 6-ply H.P. hose fitted with "Edgell" patent cut-off and Bordeaux nozzles.
TRANSPORT—Low-set, well-balanced and firmly put together.

Let us quote you for prompt delivery.

Dangar, Gedye & Co. Ltd., Young St.,
SYDNEY

Fortunately for the future, the great majority of the oncoming generation hate bustle. To wear one's responsibilities lightly and to carry one's burdens easily—or at least with no surface sign of fatigue or disquietude—stirs the deep approval of youth.

Even from one brought up in the "busy bee" school the person who keeps cool and calm wins approval. To a certain type of old-fashioned worker, however, the heart at leisure, and the mind apparently untrammelled, has a look of indolence that it irks them not to rebuke.

For our soul's sake, and verily for our bodies' sake in after years, we need to use our imagination more, and our executive ability less.

IN THE KITCHEN.

Puffed Potatoes.—Two pans are required—one pan of deep fat heated till it stops bubbling, and throws off a blue smoke—and one open frying pan with just a little fat melted in it. Peel the potatoes and slice them into rounds about the thickness of a penny. Wipe them with a clean cloth, and put them, a few at a time, into the open pan, and let them just color on both sides. They must not be cooked, only just tinted. Now scoop them up with a drainer, and drop them into the deep fat, one or two pieces at a time, with a little pause between, so that the fat may

heat up again. When they puff up considerably, scoop them out with a drainer, sprinkle with salt, and serve at once before they fall flat.

Cream Biscuit.—To one quart of flour use two teaspoons baking powder, a pinch of salt, and rich, sweet cream to make a soft dough. Roll out and bake in a quick oven, 10 to 20 minutes.

Hasty Pudding.—In two cups cold milk stir two cups cornflour, two teaspoons flour, one teaspoon salt, and gradually stir this into four cups boiling water, and boil for thirty minutes, stirring occasionally.

Date Pudding.—Soak one cupful breadcrumbs in one cup milk for ten minutes, add two beaten eggs, two

tablespoons powdered suet, one teaspoon each of salt, cinnamon and half cup sugar. Have one cup dates cut into small pieces, dredge them in one tablespoon flour, stir them into the pudding, and beat all vigorously. Turn into a well-greased mould, and steam three hours.

FRUIT for THE BRITISH EMPIRE EXHIBITION is to be sent in The Patent Climax Cases.

Why not send yours to market in these cases? THE OVERSEAS SHIPPING COMPANIES strongly recommend you to do so.

See Advt. in "Fruit World" for January, 1924, page 55.

W. M. Green, Baxter, Vic.

—(Advt.)

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Cleaned by our Special Machinery, and free from all weeds. SPECIAL QUOTATIONS for Cwt. or Ton lots on application.

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for insuring his buildings, fruit in store, Workers' Compensation, and other risks. An orchardist who becomes a shareholder and places his insurances with this Company participates in the profits which his own business creates. Thousands of farmers and orchardists are already shareholders. Write for particulars.

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High Steel, Goose-neck Beam, Fixed Handles.



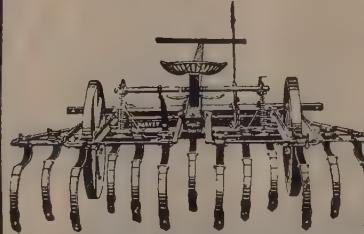
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With shifting or fixed handles. Made in
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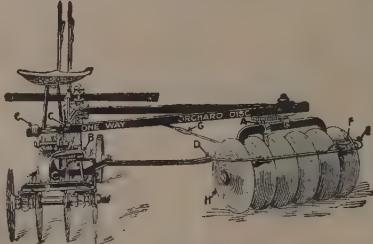
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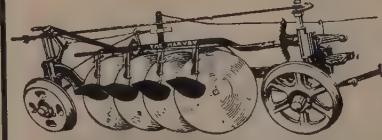
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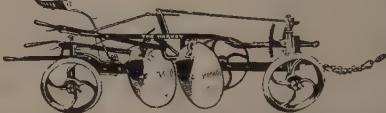
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Write for New Illustrated Catalogue

MANCHESTER AS A DISTRIBUTING CENTRE FOR AUSTRALASIAN PRODUCE.

Excellent Port Facilities.

The value of the port of Manchester as a distributing centre for produce from Australia and New Zealand is emphasised by the energetic representative of the Port (Captain W. J. Wade).

Captain Wade points out that Manchester provides all the conditions requisite for an ideal shipping and distributing centre, viz.:

(1) Docks over 400 acres in extent and 28 feet deep equipped with refrigerated and other warehouses, rail communication alongside every berth, and all the most up-to-date appliances to ensure efficient and rapid distribution or shipment of goods, with the minimum of handling and cost of transport.

(2) Great markets, cold stores, fruit auction rooms, and other subsidiary undertakings, which constitute the principal clearing houses for every variety of produce required by 10 million consumers resident within 50 miles of the port.

(3) Excellent rail and road connection with all towns in the surrounding area which is the most densely populated part of the United Kingdom; in fact, a greater population resides within a radius of 75 miles of Manchester Docks than within a similar radius of the city of London.

(4) It is one of the greatest centres of commercial and industrial activity in the world, as proved by the Manchester Bankers' Clearing House returns, which in 1922 totalled £774,612,000, i.e., greater than those of Birmingham, Bristol, Hull, Liverpool and Newcastle-on-Tyne combined.

The creation of a Port at Manchester has made it possible for those engaged in the cotton, woollen, and engineering industries — the staple trades for which Lancashire, West Yorkshire, and the Midland Counties of England are world-famous — to reduce to a minimum the transport charges on their imported produce and raw material, also on the manufactured goods they export to the world's markets.

There is evidence that importers and exporters are generally beginning to realise the wastefulness of the present methods, i.e., sending to London or some other port for subsequent railing to Manchester, which results in the payment of many thousands a year to transport organisations in England, and a corresponding reduction in the net returns obtained.

This is proved by the latest records of the aggregate imports and exports of the six principal British ports during the year ended 31st of March, 1923. During that period there was an aggregate decline of trade for all

ports equivalent to 3.7 per cent. as compared with the previous year, and the trade of the Port of London decreased by 7 per cent.—though that of Manchester increased by 6.4 per cent.

Demands for Fruit.

There is a ready market for enormous quantities of overseas fruit within the area which Manchester serves, and the time was never more opportune for utilising the facilities of the Port and its advantages as a distributing centre.

The Imperial Fruit Show, which was held in London during the two previous years, was held in Manchester from the 26th October to the 3rd of November, 1923.

Over 5,000 exhibits of British and imported fruit were shown, and the Exhibition was visited by a greater number of people than the previous Shows held in London; it is confidently anticipated that an increased demand for choice fruit will follow throughout the area served by the port.

Manchester is exceptionally well provided with markets—the Corporation of the City having recognised the importance of providing adequate accommodation and facilities for the marketing of food; the properties of the Markets Department controlled by the City Council cover an area of 27 acres, and are valued at over £1,250,000.

One of the most important of these markets is for the sale of fruit, vegetables and flowers; it was opened on its present site over a hundred years ago, and there are upwards of 300 tenants, many of whom have carried on business successfully for over half a century. This market covers an area of nearlv 6 acres—practically the whole of which is roofed in and provided with wide roadways, affording direct vehicular access to any of the business premises.

To foster the importation of produce by the Ship Canal, the City Council established fruit auction rooms in 1894, and these are used extensively for the sale of overseas

fruit; wholesale buyers attend the sales from all parts of the North of England and the Midland Counties; during the year ended 30th June, 1923, over 2,300,000 packages of fruit were sold, and in many instances distributed direct to buyers' orders from the Manchester Docks.

Generous Boss.

"The boss offered me an interest in the business to-day."

"He did!"

"Yes, he said that if I didn't take an interest pretty soon he'd sack me."

Cleaning Fruit Cases.—Trials were carried out at Bathurst (N.S.W.) Experiment Farm recently to ascertain how long a fruit case must be immersed in boiling water to kill codlin grubs in cocoons. It was found that when the grubs were located in the joints of the cases a mere dipping in and out was not sufficient. To kill them all an immersion of three minutes was required.

Up to four times the ordinary fumigating strength of cyanide proved insufficient to kill codlin moth grubs in the cocoons and in bandages.

ORCHARDISTS!

We are Citrus Tree Experts. Write us for all information on Citrus Trees. Intending planters should plant our trees. They are strong, healthy and well grown.

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— F.O.R. Ryde or F.O.B. Sydney —

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ADELAIDE:
16 Chesser Street.
Phone: 825

Poultry and Beekeeping



Poultry Notes.

(By Ian P. Hamilton.)

Seasonable Subjects.

THE ADDITION OF a little sulphur to the mash during the hot weather will reduce the possibility of heat apoplexy.

Maize, linseed, and any such heating food should be entirely discarded during the summer months.

Cull now and make ample room for young stock.

Avoid crowding. It is the forerunner of disease.

Look out for a regular and profitable market for your surplus cockerels.

Spray perches and walls of sheds with a strong carbolic-kerosene solution.

Then limewash the interior walls.

Provide shade and cool drinking water in abundance.

Where possible, give your flocks access in rotation to grass runs.

See that damped dust-baths are before the birds.

Separate early the cockerels from the pullets.

Keep some fresh ground always spelling where possible. There is nothing like a change to new ground to bring birds forward.

A supply of silver beet, lucerne and milk thistles will help to reduce the feed bill by at least 30 per cent.

Perches should be removable, and should be periodically painted with crude kerosene to keep down the red mite.

When the temperature rises about 85 degrees in the shade, it is a good plan to use the hose in moistening the runs.

This freshens them up and gives the birds an opportunity to cool their bodies and at the same time removes any insect pests.

Fresh air is the best tonic. See that it is provided in all your pens.

Keep the grit vessels filled.

Do not breed "too close." There is now no doubt that in-breeding is the cause of much of the mortality amongst chickens, "dead in the shell," and other troubles. While in-breeding for egg production some breeders have sacrificed size and stamina to such an extent that very serious consequences have resulted.

In order to maintain health in the flock it is essential to stamp out any disease in the very beginning and before it becomes established.

When estimating the number of eggs that should produce a required number of laying pullets, it may be roughly estimated that half the eggs hatched will produce pullets and one-third of the chicks would be fit for the laying pen.

Too much bottom heat in the brooder will cause leg-weakness.

A little lime may always be used in the water with advantage—but see that it is a little.

If you require to breed a large percentage of pullets procure a cockerel and mate with two-year-old hens. A two-year-old cock mated with three-year-old hens should give almost the same results. Experiments have shown that the more vigorous the stock, the greater the tendency to throw cockerels.

Bee-Keeping.

Knowledge of Locality.

MANY BEE-KEEPERS, especially beginners, think that a locality should be selected by taking into consideration only the variety of valuable honey flora which is growing there.

Often it is found when the apiary has been established that certain of the species flower too late or too early in the season to be of any value. Apart from the consideration which should be given to the variety of species of special honey flora—when making a selection of a locality for a permanent stand, attention must also be given to the flowering periods of the trees, etc.

Variation in climatic conditions has some effect on the flowering period, and within a 20-mile radius we find that on lower land, where the climate is warmer, certain autumn honey flora will flower early enough to allow the bees to gather surplus stores, whereas on higher land not far distant the same species flower too late to be of any value.

In places on higher land where the flowering periods are favourable, an

**STONE FRUITS
CITRUS TREES
and QUALITY ROSES**

BEFORE PURCHASING

for hardiness, healthiness, and vigor. Our stocks are excellent and prices right. Special attention is given to packing.

A Good Start means Everything!

LASSCOCK'S NURSERIES

send for Lasscock's Catalogue and prices. These South Australian grown trees are unsurpassed

**HENLEY BEACH ROAD,
LOCKLEYS, STH. AUSTRALIA**

REAP THE LAST OF THE EGG HARVEST

The letters reproduced below tell you how you can reap the last of the Season's egg harvest; how you can be sure that when your hens do fall into the moult they will moult quickly and come on to lay again when eggs in other Poultry yards are scarce!



Now is the time to start using Karswood Poultry Spice (containing ground insects). Under the strain of continual egg laying during the last few months your birds will shortly commence to "let up" in order that they may enjoy the resting period

which wise Nature has decreed. At this time of the year those birds which have laid well need an innocuous tonic which will enable them to complete the work of egg laying, secure the utmost advantage from the moult and get down to the serious business of "profit earning" again with the least possible delay.

False, premature or prolonged moult spells disaster to the profits your birds have already made. Housing, caring for, and feeding birds which hang in the moult all make for extra cost which can be avoided by the use of Karswood Poultry Spice—a tonic food which is guaranteed to be harmless. It contains no Gentian, No Chillies, No Capsicum, No Cayenne, No Ginger, nor any other injurious ingredients. It DOES contain dried and ground insects rich in natural assimilable phosphorus. These tonic properties make healthy birds—enrich the blood—tone up the nervous system so that more eggs are produced by natural means. Karswood is endorsed by such men as C. A. House and other World known Poultry breeders and is used by more than 500,000 Poultry Keepers every day in the year. Read the letters from Australian users set out below and resolve that you, too, will make the test that "puts the profit into poultry keeping." Remember, Karswood Poultry Spice costs only a ha'-penny a day for every twelve birds, and is guaranteed to be non-injurious. Read these letters:

"AGAIN LAYING HEAVILY."

9 Austral Terrace, Malvern, S.A.

Dear Sirs,—

I would like to inform you of the results I have obtained from using Karswood Poultry Spice, I was first informed of this Spice by a friend of mine, who strongly advised me to use it during the moult period. I was somewhat dubious at first in using it, as I was not a believer in spices for fowls, but after seriously considering it on account of the scarcity of eggs, I tried a packet and am glad to state

that I have had wonderful results from it. After using it a fortnight you could see a wonderful improvement in the condition and plumage of the birds, it having considerably assisted them through the moult and actually started them laying in the middle of it. After using several packets of Karswood and when my fowls were laying heavily, I decided to leave off Karswood but after a few weeks my eggs decreased 50 per cent, I again decided to test the qualities of Karswood and glad to say that after a few days use my fowls were again laying heavily.

I am writing this to you as I feel that you have given to the poultry keeper a chance in obtaining good results from their fowls, and to Karswood must be given the credit of reducing the usual shortage of eggs, as you must know, not prevalent this winter.

You may use this letter in any way you think fit, and again thanking you.

I am, yours faithfully,
(Signed) WALLIE R. ROBINSON.

HENS "GOING STRONG" EVER SINCE.

"Warreen," 15 Gordon Street,
Brighton Beach,
Forresville, S.A.,
15th August, 1923.

Dear Sirs,—

It gives me much pleasure in relating to you the wonderful results I obtained in using Karswood Poultry Spice. My friend, Mr. Robinson, advised me to try it six weeks ago, he having used it with splendid results, so I sent straight away for a packet, and in the first week I could see the difference in my hens. I might tell you they were hanging in the moult, and after a fortnight of Karswood they had completed the moult and had actually started laying, and thanks to the Spice they have been going strong ever since. I have been telling my friends about Karswood Poultry Spice and its results, but one or two doubted my word so I brought them down and showed them my Rhode Island Red pullets and the eggs I was getting and I can tell you they altered their tune, they have some the same age as mine and they are not laying yet, so they now intend to give Karswood a trial. I thank you for your letter and I will be very pleased to receive the book when it arrives.

You may make use of this letter with pleasure.

(Signed) H. J. BRADLEY.
7th April, 1922.

"ALL IT CLAIMS TO BE."

Dear Sirs,—

I have been using "Karswood" Poultry Spice for some time now, with excellent results. It is without doubt one of the best Poultry Spices on the market. I have also used the "Karswood" Chicken Powder with very effective results as regards chicken ailments, etc., and I must say that the results from the Spice and Powder are all that it claims to be.

Yours faithfully,
(Signed) G. McDONNELL.

"HUNDREDS OF EGGS."

28 Edward Street,
North Sydney, 3rd May, 1923.
Gentlemen,—

I should like to say that I have used your Poultry Spice for two years—ever since I started to keep fowls. I have never had more than eight White Leghorn fowls, and have had hundreds of eggs from them. Your Spice was recommended to me by a friend who brings it to me from town as Mr. Meadows, who supplies me with pollard and grain, does not keep it.

Wishing you every success.
P. M. BAITLE.

NOTE THE ECONOMY.

1/- packet supplies 20 hens 16 days,
2/- packet supplies 20 hens 32 days,
13/- tin (7lb.) supplies 140 hens 32 days.
14lb. tins, 25/-; 28lb. tins, 48/-.

"MAKES 12 HENS LAY FOR A HALFPENNY A DAY."

MAKE THIS TEST:

Get a 1/- packet of Karswood Poultry Spice from your local Storekeeper, Grocer or Produce Dealer. Try it for a fortnight on half a dozen hens. Do not expect immediate results. Karswood works NATURALLY—it does not force. It takes a fortnight or three weeks to show results—but they are good and sure.

AGENTS FOR AUSTRALIA.

New South Wales: The Coastal Farmers' Co-op. Society Ltd., Quay and Valentine Streets, Sydney.

Victoria & Tasmania: Messrs. Henry Berry & Co. Pty. Ltd., Collins Street, Melbourne.

South Australia: Messrs. S. C. Eyles & Co., Currie Street, Adelaide.

West Australia: Westralian Farmers Ltd., Wellington Street, Perth.

Queensland: The Farmers' Co-op. Dis. Co. Ltd., Turbot Street, Brisbane.

advantage is at times gained by removing the bees to the lower and warmer parts during the spring to catch the early flow and to put the bees in the right spirit to make the best of conditions when they are returned to the original stand.

SUMMER REMINDERS.

Any effort which will save his bees discomfort or an "unnecessary expenditure in energy" is well worth the while of the bee-keeper, for it means a corresponding lengthening of the bee's period of service. During the hot weather a good deal can be done in this direction.

It is important, for instance, to have a good supply of fresh water handy to the apiary. Many depend for supplies on creeks near the hives, and during dry times the water becomes scarce and bees are compelled to take long flights and thus waste a considerable amount of energy. Artificial supplies situated near the apiary are an advantage, and well worth the trouble. Again, shade at the entrances to the hives means greater comfort for the bees during the hot weather and an appreciable saving in vitality.

JOTTINGS.

Extracting operations will be carried out in a number of localities during this month.

* * *

Bee-keepers should endeavour to prevent destruction of good bee-farming localities by inducing the authorities to prevent indiscriminate ring-barking of trees.

* * *

They should also bring under the notice of agriculturists the value of such crops as Hubam Clover, White Sweet Clover, Lucerne, etc., so that localities will be improved.

* * *

To obtain the maximum flow of honey during the warm months it is necessary to provide the colonies with empty storage combs, in addition to those which will be required by the bees for their brood-rearing necessities.

It is an invariable sign of paralysis disease when dead bees are noticed at the entrance of the hive, and there are weakened bees of a half-starved appearance crawling round after ejection from the hive.

Nothard, Lowe & Wills Ltd., London.—The facilities possessed by this old-established firm for receiving and distributing fruit from Australia and other parts of the world are depicted in the double-page advertisement in the centre of this issue.

In publishing this advertisement last month, the name of the Tasmanian agents was, by an oversight, omitted. The Australian agents are as follows:—

Victoria.—J. B. Mills & Co., 9 Queen-street, Melbourne.

South Australia.—Geo. Wills & Co. Ltd., Adelaide.

West Australia.—Geo. Wills & Co. Ltd., Perth and Fremantle; Henry Wills & Co., Albany.

Tasmania.—C. Piesse & Co., Hobart.

GYPSUM POTASH LIME GROUND PHOSPHATE



The Fertilisers you require

Write for full particulars to

Arthur H. HASELL

MELBOURNE SYDNEY
PORT ADELAIDE.

Ringwood Show

MARCH 14 and 15, 1924

THE LEADING AUTUMN SHOW OF THE STATE

FRUIT, FLOWERS POULTRY, Etc.

HELD
in Spacious Halls and
Marquees right opposite
Ringwood Railway
Station.

Night Watchman provided.

Carrier in attendance.

Government Certificates,
Blue Ribbons,
Specials and Grand
Specials.

Schedules on application to
the Secretary—

G. W. MULLER
Ringwood.

WOOD-WOOL

FIRST QUALITY AND AUSTRALIAN
Less than half the cost of Imported.

A Leading Firm of London Importers report on a large shipment of pears packed in trays with our WOOD-WOOL. This consignment certainly travelled well and arrived in very good condition, the wood-wool used in packing appearing quite suitable.

Write for quotations

LAWFORD'S FRUIT EXCHANGE PTY. LTD., DONCASTER, VIC.

(Sole distributors)

The Time is Opportune

to Ship Your Fruit to

MANCHESTER

The Port in the Centre of
The Most Densely Populated Area in the United Kingdom.

THE IMPERIAL FRUIT SHOW HELD IN MANCHESTER

from the 26th October to the 3rd November, 1923 was attended by visitors from all parts of the World; over 5,000 exhibits of British and Imported Fruit were shown, and an increased demand for choice fruit will follow throughout the area which Manchester serves.

Over 2,300,000 packages of Overseas Fruit were purchased in the Manchester Fruit Auction Rooms during the year ended 30th June, 1923, by Fruit Merchants trading all over the Midland and Northern Counties of England; these purchases were distributed direct to buyers' orders from the Manchester Docks.

In explanation of largely increased trade with Manchester, the General Manager of the United Fruit Companies of Nova Scotia Ltd., stated in his recent Annual Report:—

"This Market was the most consistent throughout the entire Season. Apples were handled much more rapidly and less adjustments were necessary—brought about by the fact that the facilities at Manchester are so much better than at any other English Port.

"They certainly have a very wonderful organisation, and we believe this is one reason why Manchester is becoming recognised as one of the best distributing Ports in England.

"Liverpool, from the standpoint of marketing our fruit, ranks second, while Glasgow is spasmodic, and in London practically until the close of the Season, much lower prices ruled than on any of the other Markets."

The following Fruit carrying steamers are listed to load in Hobart and other Australian Ports for MANCHESTER during the 1924 Season:—

"AYRSHIRE"	end February	"SURREY"	early April
STEAMER	mid March	"BERWICKSHIRE" . . .	mid April
"ARGYLLSHIRE"	end "		

Big demands for space are anticipated, and early application to the Steamship Agents is advisable. If any difficulty is experienced in obtaining your requirements, write or wire to the undersigned who will render every possible assistance, and willingly furnish particulars of Port and Forwarding Charges, names of Manchester Selling Brokers, etc.

W. J. WADE

Australasian Representative of the Port of Manchester

8 Bridge Street, Sydney, N.S.W.

"It is a great labour saver"

PROGRESSIVE ORCHARDISTS find that it pays to instal an

Ellis Grader

because it is built on lines for efficiency and long service, and is just the machine for the man who cares. There is nothing to get out of order (has only one moving element) and your repair bills are nil.

Here's another letter from a progressive man:—

The Tamar Farmers & Fruitgrowers' Association,
Frankfort, West Tamar (Tas.).

19th May, 1923.

Dear Sirs,—I am pleased to say the Ellis Grader I purchased from you has given every satisfaction. I have always been somewhat sceptical of grading machines on account of the possibility of bruising the fruit, but by careful manipulation of the machine this can be reduced to a minimum; in fact, I have noticed no bruising whatever. **IT IS A GREAT LABOUR SAVER**, and convenient to pack from the respective bins.—

Yours faithfully, H. ROBINSON, Secretary.

Price, £16/10/- machine only
£21/10/- with table complete**Ellis Fruit Grader Co.**
226 FLINDERS LANE, MELBOURNE.**Agents:**

Colonial and Interstate Agents:—Queensland—Sthn. Q'land Fruitgrowers' Assn., Roma St., Brisbane, N.S.W. H. H. Hinds Ltd., 484 Kent St., Sydney. Sth. Aus.—Premier Machinery Co., Morphett St., Adelaide. New Zealand—A. Simmonds Ltd., Heretaunga St., Hastings. South Africa—Oswald Bros., Cape Town.

FRUITGROWERSCONSIGN YOUR FRUIT TO
The North of England Fruit Brokers Ltd.**MANCHESTER**

We sell and distribute among 10,000,000 consumers within a radius of 50 miles of the Manchester Docks. It is the unrivalled demand of this enormous population that enables the best prices to be obtained. Steamers will serve Manchester direct during the season of export, and a trial shipment will convince you that you are marketing in the best centre in the United Kingdom.

For particulars regarding advances, steamship services, etc., write to

N. V. WADE,

Royal Exchange, Sydney, N.S.W.

Representing

THE NORTH OF ENGLAND
FRUIT BROKERS LTD.,
MANCHESTER**Australian Commonwealth Line****FAST PASSENGER AND CARGO SERVICE TO LONDON**

Via Adelaide, Fremantle, Colombo and Port Said, transshipping at Colombo for Calcutta, Rangoon, Madras and Bombay : :

VESSELS SAIL AS UNDER:—

	Tons	Brisbane	Sydney	Melbourne	Adelaide	Fremantle
T.S.S. ESPERANCE BAY	13,850	9th Feb.	16th Feb.	20th Feb.	23rd Feb.	28th Feb.
" MORETON BAY	13,850	4th Mar.	11th Mar.	19th Mar.	22nd Mar.	27th Mar.
" JERVIS BAY	13,850	1st Apr.	8th Apr.	16th Apr.	19th Apr.	24th Apr.
" LARGS BAY	13,850	22nd Apr.	29th Apr.	7th May	10th May	15th May
" HOBSONS BAY	13,850	17th May	24th May	28th "	31st "	5th June

Taking Wool, General and Frozen Cargo at Lowest Rates.

FOR FULL PARTICULARS APPLY TO—

Australian Commonwealth Line, 447-451 Collins St., Melbourne

Offices: BRISBANE SYDNEY, MELBOURNE, ADELAIDE.

AGENTS AT ALL OTHER AUSTRALIAN PORTS

Fruitgrowers, Exporters

Throughout Australia and New Zealand

— Send your —

APPLES, PEARS, ORANGES

— to —

T. S. JOHNSON & CO.

Fruit Salesmen

ESTABLISHED IN

Liverpool, Manchester, Leeds, Hull

A population of 40 million people, all large fruit eaters,
is reached through these centres.

Some Good Reasons why Australian Fruit should be sent to
LIVERPOOL MANCHESTER AND HULL

- (1) These ports serve the large populations in the North and Midlands of England, also Scotland, Ireland, and Continental Markets.
- (2) Some of the largest coal fields are situated in these centres, the hardworking population are big fruiteaters.
- (3) Quick unloading and despatch of fruit is provided.
- (4) Cold storage facilities are available.
- (5) Direct shipments to Liverpool, Manchester and Hull save extra handling charges as is the case when fruit is transhipped from London.
- (6) Shipments should be made to T. S. Johnson & Co., because they give you the choice of the three ports and their efficient selling Organisations which are established therein.
- (7) T. S. Johnson & Co.'s regular circle of buyers and wide distributing channels enables them to secure highest prices.
- (8) The way to develop new markets is to concentrate on those British outports which are earnestly striving to increase their trade in fruit with Australia.

WRITE FOR ADDITIONAL INFORMATION.

Agents :

VICTORIA.—Messrs. INTERNATIONAL FRUIT & MERCANTILE CO., 410-414 Flinders Lane, Melb.
 TASMANIA.—Messrs. E. R. COTTIER & CO., 82 Collins Street, Hobart.
 SOUTH AUSTRALIA.—Messrs. BROCK & BATCHELOR LTD., Port Adelaide.
 WESTERN AUSTRALIA.—GEO. EVANS & CO., 46 Mouatt Street, Fremantle.

--The GUIDER FRUIT GRADER--

The latest labor-saving device on the Orchard

A well designed and faithfully constructed outfit which has won golden opinions from practical growers of all kinds of fruit.



The Guider Fruit Grader, "The Feeding Grader Unit." The Guider, when shipped, is 20 inches wide and 7 ft. long. Conveyor Feeder, 10 inches x 3 feet.

YOU NEED A GRADER!

The Guider is best. It guides the fruit into correct compartments.
No handling; no bruising.

OUTSTANDING FEATURES:

Quick : Accurate : Durable : Cheap : Portable.

No bruising of the fruit.

No drop anywhere.

Works with hand or power.

THE LATEST AND BEST IN
FRUIT GRADING MACHINES.

GRADES
ALL KINDS OF
FRUIT

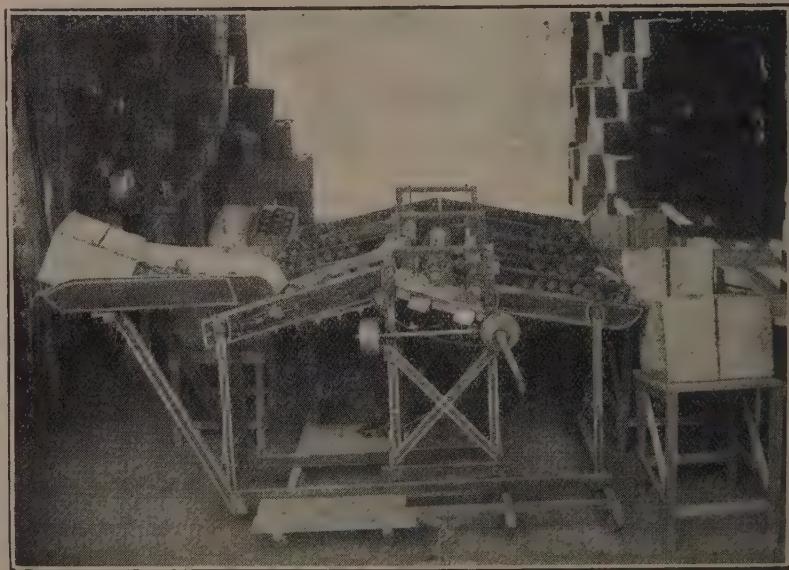
**PUT TO THE TEST
THE "GUIDER" IS BEST**

Built to suit
LARGE PACKING
HOUSES

and
for use on small
Orchards.

Accommodation is provided
for any number of packers.
Graded fruit conveyed to
packers. No handling.

YOU IMPROVE YOUR
ORCHARD EQUIPMENT
BY INSTALLING A GUIDER
FRUIT GRADER.

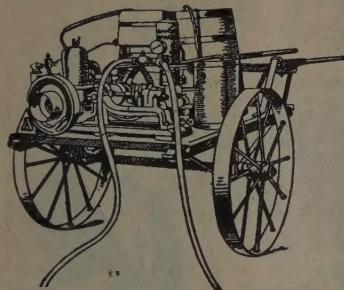


The "Guider" Fruit Grader in Operation.

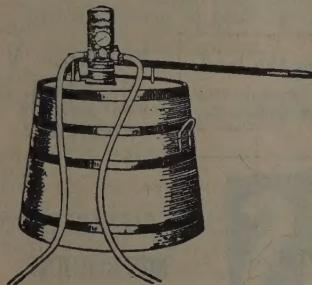
THE GUIDER FRUIT GRADER COMBINES PRACTICAL FRUITGROWING EXPERIENCE WITH
ENGINEERING SKILL.

J. L. HOLLAND, *Patentee and
Builder* **Shepparton, Vic.**

WRITE FOR PARTICULARS.



ASK FOR CATALOGUE
POWER and HAND
SPRAYERS



THE BAVE-U
IS THE
PIONEER AUSTRALIAN
POWER SPRAYER

and has held its own against all comers for the past 14 years

RUSSELL & CO., Makers
BOX HILL, MELBOURNE

Read what Satisfied Users of the BAVE-U have to say

Extract from letter, E. Swan, Londrigan.

"I thought you would be interested to know how I have got on with the new pump. We have just finished our Winter wash on the whole orchard, 7,000 gallons of lime sulphur and 500 gallons of oil, and the pump ran without any trouble whatever. I consider it about perfection in spraying outfits. The old pump which was purchased 8 years ago is just as reliable and as good as new now. Wishing you the success you deserve with your Sprayers."

Extract from letter, M. Jenkin, Nyah West.

"I am doing all sorts of work with engine of Sprayer, sawing wood and pumping, and it has done very good work and no trouble."

AGENTS:

South Australia: Premier Machinery Co.
Morphett Street, Adelaide.

West Australia: Gibbs, Bright & Co.
Fremantle

Established 1864

EDWARD H. LEWIS
& SON LTD

SALES BY PRIVATE TREATY

SHIPPING

450

NUMBER

Head Offices: COVENT GARDEN, LONDON
~~~~~ AND ALL PRINCIPAL PORTS ~~~~

Chief Australasian  
Agents:

F. J. BENNETT & CO., Hobart Tas.

## Don't Take Chances

Sow only the  
Tested and Proved

**"MESGAWI"**

Strain of

## BERSEEM CLOVER

Brunning's "Mesgawi" is best suited to Australian conditions. Best results are assured.

Berseem Clover is the finest of all the Winter Fodders, and the heaviest yielder.

Grows in Winter like Lucerne in Summer, and can be pastured, cut for green feed or made into hay.

BETTER SEEDS  
BETTER CROPS

Annual Winter Fodder Crops are valuable for cleansing the land.

The Annual Winter Fodder Crop Mixtures are perhaps better known as Four Purpose Crops, on account of the four purposes for which they are famous.

FURTHER PAR-  
TICULARS AND  
PRICES ON AP-  
PLICATION.

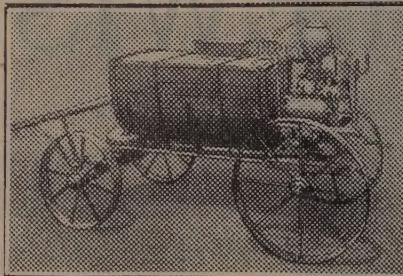
THE LARGEST AND...  
LEADING SEED HOUSE  
IN VICTORIA  
(F. H. Brunning Pty. Ltd.)

# BRUNNINGS

64 ELIZABETH ST.  
MELBOURNE

## KANGAROO SPRAY PUMPS

MADE IN AUSTRALIA



Our Latest Model Water Cooled Engine is the most compact, efficient, and cheapest outfit ever offered. Material of the best. Expert workmanship. Working demonstration may be had at Factory before delivery. Initial cost is last cost. Come right here and save money. Catalogs on application.

**£100/-**

No. 5 Kangaroo Spray Pump on Vat, £10/10/-; on Cask £8/-  
No. 4 Kangaroo Double Delivery on Cask, £7/7/6; Single,  
£6/7/6. Brown's Auto Spray No. 5, 30/-

**Arsenate of Lead** "Vallo" Brand. Best Australian production. Satisfaction to all users.

**Swift's** The highest grade in the world. Tons sold, and no complaints. Absolute reliability proved.

PLEASE SEND FOR QUOTATIONS

**Planet Junior** Labor Saving Implements. Send for particulars and prices.

**Orchard Ploughs** Prices low, and variety to choose from.

Cultivators, Harrows, and all kinds of Implements and Garden Tools kept in stock.

**Incubators** The Famous TAMLIN. Most reliable Incubator on the market. Holds world's record for hatching. Brooders, Fowl Rings, all Poultry Requirements

**D. & W. CHANDLER LIMITED,**

... IRONMONGERS ...  
276 to 294 Brunswick St.,

**Fitzroy**  
Victoria

# The Fruit Trade

## Every Firm should be Officially Represented

if only by a line or two—Our Readers are Your Clients. It is an able and wise introduction, and when you go through the fruit districts our Readers will have already known you through us. It pays best to send Consignments Regularly—Not Occasionally—to the best markets, by doing so you strike the rising and falling markets and make a fair average for the season.

A ten times wider and better distribution will ensure a ten times greater production, at more payable returns. It is large and valuable exports from settled industries that make a nation prosperous.—Ed. "F.W."

This Journal is the recognised representative of the FRUIT TRADE in the Southern Hemisphere.

### REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS.

Advertising in this Journal.

#### NEW SOUTH WALES.

##### Sydney.

Chilton, F., City Fruit Markets.  
Hopkins & Lipscombe, Fruit Exchange.  
Rogers, F. H. G., Fruit Exchange.  
Rule & Beavis, Fruit Exchange.  
Wade, Noel, V., Royal Exchange (representing the North of England Fruit Brokers Ltd., Manchester, Eng.).

##### VICTORIA.

Melbourne.  
Coastal Farmers' Co-op. Society, Western Market.  
Davis, J., Western Market.  
Lister, G., Western Market.  
Mills & Co., J. B., 9 Queen Street (representing Nothard, Lowe & Wills Ltd., London).  
Millis, A., & Sons, Western Markets.  
McClure, Valentine & Co. Pty. Ltd., 49 William St.  
Mumford, J. G., 449 Flinders Lane.  
Pang & Co. Ltd., H. L., Little Bourke St.  
Silbert, Sharp & Davies, Western Markets.  
Stott & Son, T., Western Markets.  
Tim Young & Co., Western Market.  
Vear, F. W., 49 William Street.  
Wade & Co., H. M., 439 Flinders Lane.  
Woolf, G., Western Market.

#### QUEENSLAND.

Brisbane.  
Barr, A. S., Fruit Exchange.  
Collyard & Mackay, Fruit Exchange.  
Cooksley & Co., Fruit Exchange.  
Finlayson & Son, Fruit Exchange.  
Geeves, H. V., Fruit Exchange.  
International Fruit and Produce Co., Fruit Exchange.  
Robsons Ltd., Fruit Exchange.  
W. J. Whitten & Co., Fruit Exchange.

#### WESTERN AUSTRALIA.

Perth.  
Wills & Co. Ltd., G., Exporters.

#### SOUTH AUSTRALIA.

Adelaide.  
Wills & Co. Ltd., G., Exporters.

#### TASMANIA.

Hobart.  
Jones & Co. Ltd., H., Fruit Exporters.  
Peacock & Co., W. D., Fruit Exporters, and at London.

#### NEW ZEALAND.

Auckland.  
Radley & Co. Ltd., Fruit Auctioneers.  
Turner & Growers Ltd., City Markets.  
Dunedin.  
Co-operative Fruitgrowers' of Otago Ltd.  
Paterson, Thos., & Co., Vogel Street.

#### ENGLAND.

London.  
Bradnum, Jas., Covent Garden.  
Da Costa, Gerald, Covent Garden.

## The Fruit World of Australasia.

### Germany.

Hamburg (Dec. 18)—Winesaps (per box), 15/- to 24/-; Jon., 15/- to 20/-; Newtowns, 12/- to 14/-; strong demand for best Apples.

### Canada.

Ottawa (Dec. 27)—Spy, Jon., Del. (boxes), 9/9 to 13/6.

Montreal (Dec. 27)—Jon., 9/- to 10/-; Del., 14/6; Pears, W.N., 11/3 to 13/3 (per box). —

### Victoria.

Melbourne (30/1/24).

The following are the prices ruling at the Western Market:—Apples—Choice and good eating, 5/- to 7/-; choice and good cooking, 3/- to 5/-; Apricots, choice and good dessert, 7/6 to 9/6; medium dessert, 6/- to 6/6; Bananas, Queensland, 18/- to 24/- dble. Lemons, Victorian, 10/- to 14/-; imported, 23/- to 25/-; Nectarines, 6/- to 9/-; Oranges, imported, 25/- to 27/6; Passion-fruit, N.S.W., 12/- to 20/-; Peaches, choice and good dessert, 9/- to 12/-; medium dessert, 6/- to 7/-; canning, 3/- to 4/-; Pears, W. Bc., green, 5/- to 9/-; ripe, 8/- to 10/-; Plums, dark, light, and Japanese, 3/- to 4/6; Pineapples, Queens, 11/- to 14/- double.

### New South Wales.

Sydney (24/1/24).

Mr. F. Chilton, City Fruit Markets, reports prices as follows:—

Queensland Fruits.—Pines, smooths (colored), 12/- to 15/- per case. New South Wales Fruits—Bananas, Tweed River, 18/- to 28/- per case; Oranges, 16/- to 24/- per bushel case; Lemons, 7/- to 11/-; Apples, eating, 3/- to 20/-; early green cookers, 3/- to 14/-; Passions, 4/- to 10/- per half case; Apricots, 3/- to 6/-; Peaches, 3/- to 8/-; Plums, 1/6 to 10/-, N.B.—Prices for New South Wales fruit are quoted exclusive of case. Victorian Fruits—Apples, W. Favorite, 10/- to 17/- per bushel case; Gravenstein, 15/- to 20/-. Tasmanian Fruits.—Apricots, 3/- to 6/- per  $\frac{1}{2}$  bushel case. Fair supplies of Peaches and Plums are coming forward, but Grapes and Apples are very scarce and in demand. Pears, Pines, Passions are selling freely. Lemons are dull.

### Western Australia.

Perth (26/1/24).

Dessert, best, to 13/3 per bushel case; small, to 7/-; cooking, best, 8/- to 10/-; others, to 6/6; Cleos., 3's, to 7/6; Pears, Bartlett's, bushel, 9/- to 11/9; small, to 8/-; 3's, to 8/6; Peaches, best, 17/- to 21/9; medium, 12/- to 15/-; small, to 10/-; Apricots, best, 15/- to 20/3; others, to 11/-; half-bushel, to 12/-; Plums, Satsuma, best, 10/- to 14/-; small, to 8/-; Wickson, best, 7/- to 12/-; Climax, best, 7/- to 14/-; Shiro, to 9/3; Bur-banks, best, 6/- to 9/-; Nectarines, best, 13/- to 17/3; small, to 8/-; Passion-fruit, 3's, 5/- to 10/-; Oranges, 3's, best, to 10/-; others, to 7/-; Lemons, best, 5/- to 7/3; large, to 4/-; Grapes, open cases, Black Muscats, to 9/3; Hamburg, to 8/3; Chasselas, 5/6 to 6/6; closed cases, Black Muscats, 7/9; Chasselas, 4/-.

## British and Australasian Market Reports

### Great Britain.

London (20/12/23).

Apricots, South African, 10/- to 12/- per box; Apples, English, 5/- to 12/-; Cox's O.P., 10/- to 20/- per  $\frac{1}{2}$  sieve; Cal. Newtowns, 9/- to 10/6; Nova Scotian, 20/- to 30/- per barrel; Bananas, Fyffe, 11/- to 22/6; Hoya, 16/- to 29/-; Figs, Smyrna, 28lb. box, 21/- to 22/6; Grapes, English, Muscat, 5/- to 10/-; Lemons, 300's, 12/- to 18/-; Oranges, 8/- to 20/- per case; Peaches, South African, 12/- to 15/- per doz.; Pears, Cal., 10/6 to 20/- half case; Pines, 1/- to 6/- each.

The Canadian Fruit Trade Commissioner in England reports prices for fruit as follows:—

Southampton (Dec. 18).—Jon., 8/6 to 10/-; Newtowns, 9/9 to 10/3.

London (Dec. 21)—Jon., 9/3 to 11/—; Golden Russet, 8/- to 9/-.

Glasgow (Dec. 20)—Del., 8/- to 10/-; Jon. and Spitz, 8/3 to 10/3.

Liverpool (Dec. 21).—Jon. (box), 9/- to 10/9.

## South Australia.

Adelaide (26/1/24).

Apples, eating, 5/- per case; cooking, 3/- to 4/-; Apricots, 12/- to 13/-; Bananas, Queensland, 32/- to 36/-; Currants, black, 10/- per doz. lb.; Lemons, 14/-; Nectarines, 14/- to 16/-; Oranges, 16/- to 18/-; Passion-fruit, 25/-; Peaches, 12/-; Pears, eating, 5/- to 8/-; cooking, 4/-; Pineapples, 20/-; Plums, light, 5/- to 6/-; dark, 6/- to 7/-; Japanese, 7/- to 8/-

## Queensland.

Brisbane (25/1/24).

Apples, eating, 8/- to 16/- a bushel case; cooking, 8/- to 13/6; Lemons, Lisbon, 4/6 to 6/-; Passion-fruit, 5/- to 8/6 a half-bushel case; Peaches, 1/6 to 6/6; Plums, 2/6 to 7/-; Pineapples, smooth, 1/- to 3/9 a dozen; rough, 1/- to 4/6; Bananas, Cavendish, 2½d. to 7d.; sugar, 2½d. to 8d.; Grapes, black, 2½d. to 4d. a lb.; white, 2½d. to 4d.

## New Zealand.

Dunedin (18/1/24).

Messrs. Reilly's Central Produce Mart, Ltd. report, under date (18/1/24):—Full supplies of fruits and vegetables of all descriptions. Choice dessert and cooking fruits have met a keen demand. The following prices were secured for consignments:—Raspberries, 1/2 to 1/4; Apricots, jam, 2d. to 3d.; dessert, 3d. to 5d.; Peaches, jam, 2d. to 3d.; dessert, 3d. to 5d.; local Grapes, 1/10 to 2/1; Black Currants, 8d.; red Currants, 7½d.; Cherry Plums, 2½d. to 3½d.; Dark Plums, 1½d. to 4½d.; Pears, 2½d., 4d.; Nectarines, 3½d. 6d.; Apples, local cookers, 3d., 5d.; desserts, 5d. 7½d. per lb.; inferior windfalls, 2/6 to 5/- per case; Lemons, 47/6; Oranges, 37/6; Bananas, ripe, 35/-.

## SUBSCRIBERS' PAYMENTS RECEIVED.

The following are the subscriptions received from December 20th, 1923, to January 20th, 1924. The month quoted in parenthesis indicates to what date the subscription is paid. These are exclusive of the subscribers who have paid to local agents or to our offices in the various States:—Australian Gaslight Co. (Nov., '24), W. E. Barrett (June, '25), A. Black (Sep., '24), A. W. Bowen & Co. (Oct., '24), Brown Bros. (Oct., '24), California Spray Chem. Co. (Aug., '24), F. J. Churchers (Oct., '24), A. Cochran & Son (Aug., '23), Croydon Orchardists' Co-op. Assoc. Ltd. (Aug., '24), W. E. Dowrick (Dec., '24), W. H. Ferguson (Nov., '24), R. Fulton (Dec., '24), T. Gaudion (Oct., '24), F. Gill (Dec., '25), C. W. Giles (Nov., '24), A. J. Goode (Sep., '24), S. H. Green (Aug., '24), H. O. Hannaford (Sep., '24), Jas. Handley (Aug., '24), J. Handasyde (Oct., '24), L. A. Harris (Sep., '24), F. H. Holland (Sep., '24), F. W. Hoffman (Nov., '24), R. R. Hurst (Nov.,

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## PASSIFLORA EDULIS IN CALIFORNIA.

IT IS RATHER STRANGE that this very fine fruit, which has become so popular and so extensively grown in the Commonwealth, should be so little known in California. It is all the more strange, seeing that the Passion-fruit is a native of Brazil and the West Indies.

In Hedrick's book, "Sturtevant's Notes on Edible Plants," this fruit is only given a passing notice, where it states that "the taste is acid, and the flavour somewhat like that of an Orange—and of an agreeable and cooling taste." We Australians would possibly be more enthusiastic in our description of Passion-fruit.

In September, 1922, Mr. P. Val Kerr, manager of the Park Orchards, Mitcham, Victoria, sent some seed of Passiflora edulis to Professor Brown, of the Oregon Agricultural College. Mr. Kerr had noted, while in California after the war, that Passion-fruit was practically unknown.

In September, 1924, Professor Brown wrote to Mr. Kerr, giving a report of his success. The seed was sown on arrival, and planted out in a greenhouse. In twelve months' time the plants were reported to be doing very well, and the first fruits were about to mature. Professor Brown added, "We expect to keep growing this in our greenhouses for purposes of display to our students and visitors."

It is very interesting to note that the Passion-fruit has succeeded so well in Oregon, fruiting in twelve months in a glass-house. It will, in the near future, possibly be generally grown in the Western States.

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## BOOKS.

FRUIT WORLD ANNUAL AND TRADE RECORD, 1923 edition available. 3/- posted—9 Queen Street, Melbourne.

PRUNING FRUIT TREES, By G. Quinn. Illustrated. 4/9 posted—“Fruit World,” 9 Queen Street, Melbourne, Vic.

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